This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

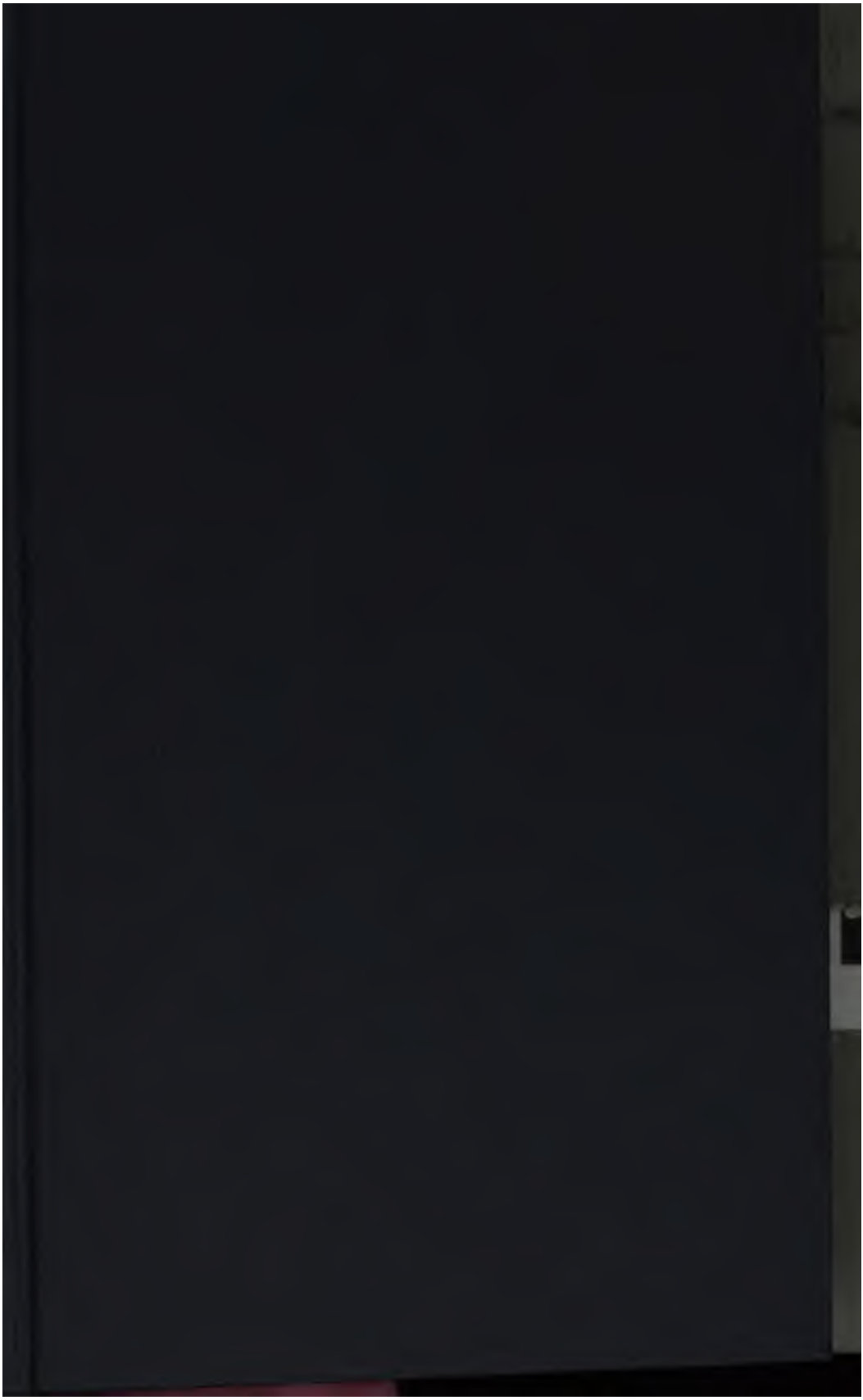
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`



Harvard College Library

FROM

Harvard College Library

FROM

Harvard College Library

FROM

AN ESSAY

ON THE

PRINCIPLE OF POPULATION.

VOL. I.

AN ESSAY

ON THE

PRINCIPLE OF POPULATION;

OR, A

VIEW OF ITS PAST AND PRESENT EFFECTS

ON

HUMAN HAPPINESS;

WITH

AN INQUIRY INTO OUR PROSPECTS RESPECTING THE FUTURE REMOVAL OR MITIGATION OF THE EVILS WHICH IT OCCASIONS.

BY *T. R. MALTHUS*, A. M.

LATE FELLOW OF JESUS COLLEGE, CAMBRIDGE.

IN TWO VOLUMES.

VOL. I.

FIRST AMERICAN, FROM THE THIRD LONDON EDITION.

WASHINGTON CITY:

PRINTED AND PUBLISHED BY ROGER CHEW WEIGHTMAN,

PENNSYLVANIA AVENUE.

1809.

24.31--

E. con 2413.1.3

ADVERTISEMENT

TO THE

THIRD EDITION.

THE principal alterations in the present edition are the following:

The chapters which were the fourth and sixth of the second book are nearly rewritten, on account of an error into which the author had fallen in an attempt to estimate the fruitfulness of marriages and the number of the born living to be married, from the data in registers; and as the chapters in their present state, are not suggested by those which immediately preceded them in the same manner as they were before, they are transferred to the latter part of the book, and now form the ninth and tenth chapters.

In the chapter of the same book, which treats of the Checks to Population in England, a remark has been added to show the incorrectness of considering the proportion of births as nearly uniform throughout the last century, and consequently of founding an estimate of the population at different periods on such grounds.

In the fifth chapter of the third book an observation has been inserted on the policy as well as duty of assisting the poor through temporary seasons of distress; and in the seventh, eighth, ninth, and tenth chapters of the same book, some passages have been omitted and others added, particularly in the tenth, which treats of bounties on the exportation of corn, on account of the present importance of the subject, and the discussion which it has lately received.

In the sixth chapter of the fourth book, one passage has been omitted, and a passage has been added on the effect of good government in diminishing poverty.

In the seventh chapter of the same book a passage has been omitted; and in the eighth chapter a passage of some length, relating to a comparison of the married and unmarried, has been omitted, and an observation added on the propriety of not underrating the desirableness of marriage, while we are inculcating the duties of moral restraint.

These are the most prominent alterations. The rest consist merely of a few verbal corrections, and here and there a short passage or explanatory note, to prevent misconceptions. These minor corrections occur principally in the two first chapters.

The reader will see that the alterations here

mentioned do not affect the principles of the work, and therefore do not essentially lessen the value of the quarto edition.

In an appendix, an answer is given to the principal objections which have been urged against the Essay; and for the accommodation of the purchasers of the former edition it is printed in quarto, and may be had separately. Those who have not leisure or inclination to read the entire work, will find in the appendix such a notice of its most prominent arguments, as will give them a good general idea of the aim and bent of the whole.

For the sake of making the volumes more equal, the printer has placed the Index to both at the end of the first. It was not at first foreseen that the Appendix and Index would be so long, or a preferable division of the volumes would have been adopted.

PREFACE.

THE Essay on the Principle of Population, which I published in 1798, was suggested, as is expressed in the preface, by a paper in Mr. Godwin's Inquirer. It was written on the impulse of the occasion, and from the few materials which were within my reach in a country situation. The only authors from whose writings I had deduced the principle, which formed the main argument of the Essay, were Hume, Wallace, Dr. Adam Smith, and Dr. Price; and my object was to apply it, to try the truth of those speculations on the perfectibility of man and society, which at that time excited a considerable portion of the public attention.

In the course of the discussion I was naturally led into some examination of the effects of this principle on the existing state of society. It appeared to account for much of that poverty and misery observable among the lower classes of people in every nation, and for those reiterated failures in the efforts of the higher classes to relieve them. The more I considered the subject in this point of view, the more importance it seemed to

acquire; and this consideration, joined to the degree of public attention which the Essay excited, determined me to turn my leisure reading towards an historical examination of the effects of the Principle of Population on the past and present state of society; that, by illustrating the subject more generally and drawing those inferences from it, in application to the actual state of things, which experience seemed to warrant, I might give it a more practical and permanent interest.

In the course of this inquiry, I found that much more had been done than I had been aware of, when I first published the Essay. The poverty and misery arising from a too rapid increase of population, had been distinctly seen, and the most violent remedies proposed, so long ago as the times of Plato and Aristotle. And of late years, the subject has been treated in such a manner by some of the French Economists, occasionally by Montesquieu, and among our own writers, by Dr. Franklin, Sir James Steuart, Mr. Arthur Young, and Mr. Townsend, as to create a natural surprise, that it had not excited more of the public attention.

Much, however, remained yet to be done. Independently of the comparison between the increase of population and food, which had not perhaps been stated with sufficient force and precision, some of the most curious and interesting

parts of the subject had been either wholly omitted or treated very slightly. Though it had been stated distinctly, that population must always be kept down to the level of the means of subsistence; yet few inquiries had been made into the various modes by which this level is effected; and the principle had never been sufficiently pursued to its consequences, and those practical inferences drawn from it, which a strict examination of its effects on society appears to suggest.

These are therefore the points which I have treated most in detail in the following Essay. In its present shape it may be considered as a new work, and I should probably have published it as such, omitting the few parts of the former which I have retained, but that I wished it to form a whole of itself, and not to need a continual reference to the other. On this account I trust that no apology is necessary to the purchasers of the first edition.

To those who either understood the subject before, or saw it distinctly on the perusal of the first edition, I am fearful that I shall appear to have treated some parts of it too much in detail, and to have been guilty of unnecessary repetitions. These faults have arisen partly from want of skill, and partly from intention. In drawing similar inferences from the state of society in a number of different countries, I found it very difficult to avoid

some repetitions; and in those parts of the inquiry which led to conclusions different from our usual habits of thinking, it appeared to me, that, with the slightest hope of producing conviction, it was necessary to present them to the reader's mind at different times, and on different occasions. I was willing to sacrifice all pretentions to merit of composition, to the chance of making an impression on a larger class of readers.

The main principle advanced is so incontrovertible, that, if I had confined myself merely to general views, I could have intrenched myself in an impregnable fortress; and the work, in this form, would probably have had a much more masterly air. But such general views, though they may advance the cause of abstract truth, rarely tend to promote any practical good; and I thought that I should not do justice to the subject, and bring it fairly under discussion, if I refused to consider any of the consequences which appeared necessarily to flow from it, whatever these consequences might be. By pursuing this plan, however, I am aware that I have opened a door to many objections; and, probably, to much severity of criticism: but I console myself with the reflection, that even the errors into which I may have fallen, by affording a handle to argument, and an additional excitement to examination, may

be subservient to the important end, of bringing a subject so nearly connected with the happiness of society into more general notice.

Throughout the whole of the present work, I have so far differed in principle from the former, as to suppose another check to population possible, which does not strictly come under the head either of vice or misery; and, in the latter part I have endeavored to soften some of the harshest conclusions of the first Essay. In doing this, I hope that I have not violated the principles of just reasoning; nor expressed any opinion, respecting the probable improvement of society, in which I am not borne out by the experience of the past. To those who shall still think that any check to population whatever, would be worse than the evils which it would relieve, the conclusions of the former Essay will remain in full force; and if we adopt this opinion, we shall be compelled to acknowledge that the poverty and misery which prevail among the lower classes of society, are absolutely irremediable.

I have taken as much pains as I could to avoid any errors in the facts and calculations which have been produced in the course of the work. Should any of them nevertheless turn out to be false, the reader will see, that they will not materially affect the general tenor of the reasoning.

From the crowd of materials which presented themselves, in illustration of the first branch of the subject, I dare not flatter myself that I have selected the best, or arranged them in the most perspicuous method. To those who take an interest in moral and political questions, I hope that the novelty and importance of the subject will compensate the imperfections of its execution.

LONDON, *June* 8th, 1803.

CONTENTS

OF THE

FIRST VOLUME.

BOOK I.

OF THE CHECKS TO POPULATION IN THE LESS CIVILIZED PARTS OF THE WORLD AND IN PAST TIMES.

		Page
CHAP. I.	Statement of the Subject. Ratios of the Increase of Population and Food,	1
II.	Of the general Checks to Population, and the Mode of their Operation,	14
III.	Of the Checks to Population in the lowest Stage of Human Society,	29
IV.	Of the Checks to Population among the American Indians,	41
V.	Of the Checks to Population in the Islands of the South Sea,	79
VI.	Of the Checks to Population among the ancient Inhabitants of the North of Europe,	111
VII.	Of the Checks to Population among modern Pastoral Nations,	144
VIII.	Of the Checks to Population in different parts of Africa,	173
IX.	Of the Checks to Population in Siberia, Northern and Southern,	198

Page.

CHAP. X. Of the Checks to Population in the Turkish Dominions and Persia, . . 214

XI. Of the Checks to Population in Indostan and Tibet, ... 226

XII. Of the Checks to Population in China and Japan, ... 245

XIII. Of the Checks to Population among the Greeks, ... 275

XIV. Of the Checks to Population among the Romans, ... 289

BOOK II.

OF THE CHECKS TO POPULATION IN THE DIFFERENT STATES OF MODERN EUROPE.

Page.

CHAP. I. Of the Checks to Population in Norway, 307

II. Of the Checks to Population in Sweden, 328

III. Of the Checks to Population in Russia, 352

IV. Of the Checks to Population in the middle parts of Europe, . . . 376

V. Of the Checks to Population in Switzerland, ... 396

VI. Of the Checks to Population in France, 426

VII. Of the Checks to Population in England, 453

VIII. Of the Checks to Population in Scotland and Ireland, ... 486

ESSAY, &c.

BOOK I.

OF THE CHECKS TO POPULATION IN THE LESS CIVILIZED PARTS OF THE WORLD AND IN PAST TIMES.

CHAPTER I.

Statement of the Subject. Ratios of the Increase of Population and Food.

IN an inquiry concerning the improvement of society, the mode of conducting the subject which naturally presents itself, is

1. To investigate the causes that have hitherto impeded the progress of mankind towards happiness; and

2. To examine the probability of the total or partial removal of these causes in future.

To enter fully into this question, and to enumerate all the causes that have hitherto influenced

human improvement, would be much beyond the power of an individual. The principal object of the present essay is to examine the effects of one great cause intimately united with the very nature of man, which, though it has been constantly and powerfully operating since the commencement of society, has been little noticed by the writers who have treated this subject. The facts which establish the existence of this cause have, indeed, been repeatedly stated and acknowledged; but its natural and necessary effects have been almost totally overlooked; though probably among these effects may be reckoned a very considerable portion of that vice and misery, and of that unequal distribution of the bounties of nature, which it has been the unceasing object of the enlightened philanthropist in all ages to correct.

The cause to which I allude, is the constant tendency in all animated life to increase beyond the nourishment prepared for it.

It is observed by Dr. Franklin, that there is no bound to the prolific nature of plants or animals, but what is made by their crowding and interfering with each others means of subsistence. Were the face of the earth, he says, vacant of other plants, it might be gradually sowed and overspread

the increase of population and food.

with one kind only, as for instance with fennel: and were it empty of other inhabitants, it might in a few ages be replenished from one nation only, as for instance with Englishmen.[1]

This is incontrovertibly true. Through the animal and vegetable kingdoms nature has scattered the seeds of life abroad with the most profuse and liberal hand; but has been comparatively sparing in the room and the nourishment necessary to rear them. The germs of existence contained in this earth, if they could freely develope themselves, would fill millions of worlds in the course of a few thousand years. Necessity, that imperious, all-pervading law of nature, restrains them within the prescribed bounds. The race of plants and the race of animals shrink under this great restrictive law; and man cannnot by any efforts of reason escape from it.

In plants and irrational animals, the view of the subject is simple. They are all impelled by a powerful instinct to the increase of their species; and this instinct is interrupted by no doubts about providing for their offspring. Wherever, therefore, there is liberty, the power of increase is ex-

[1] Franklin's Miscell. p. 9.

erted; and the superabundant effects are repressed afterwards by want of room and nourishment.

The effects of this check on man are more complicated. Impelled to the increase of his species by an equally powerful instinct, reason interrupts his career, and asks him whether he may not bring beings into the world, for whom he cannot provide the means of support. If he attend to this natural suggestion, the restriction too frequently produces vice. If he hear it not, the human race will be constantly endeavoring to increase beyond the means of subsistence. But as by that law of our nature which makes food necessary to the life of man, population can never actually increase beyond the lowest nourishment capable of supporting it, a strong check on population from the difficulty of acquiring food must be constantly in operation. This difficulty must fall somewhere, and must necessarily be severely felt in some or other of the various forms of misery, or the fear of misery, by a large portion of mankind.

That population has this constant tendency to increase beyond the means of subsistence, and that it is kept to its necessary level by these causes, will sufficiently appear from a review of

the increase of population and food.

the different states of society in which man has existed. But before we proceed to this review, the subject will perhaps be seen in a clearer light, if we endeavor to ascertain, what would be the natural increase of population, if left to exert itself with perfect freedom; and what might be expected to be the rate of increase in the productions of the earth, under the most favorable circumstances of human industry.

It will be allowed, that no country has hitherto been known, where the manners were so pure and simple, and the means of subsistence so abundant, that no check whatever has existed to early marriages from the difficulty of providing for a family, and that no waste of the human species has been occasioned by vicious customs, by towns, by unhealthy occupations, or too severe labor. Consequently in no state that we have yet known, has the power of population been left to exert itself with perfect freedom.

Whether the law of marriage be instituted, or not, the dictate of nature and virtue seems to be an early attachment to one woman; and where there were no impediments of any kind in the way of an union to which such an attachment would lead, and no causes of depopulation after-

wards, the increase of the human species would be evidently much greater than any increase which has been hitherto known.

In the northern states of America, where the means of subsistence have been more ample, the manners of the people more pure, and the checks to early marriages fewer, than in any of the modern states of Europe, the population has been found to double itself, for above a century and a half successively, in less than in each period of twenty-five years.[1] Yet even during these periods, in some of the towns, the deaths exceeded the births,[2] a circumstance which clearly proves that in those parts of the country which supplied this deficiency, the increase must have been much more rapid than the general average.

In the back settlements, where the sole employment is agriculture, and vicious customs and

[1] It appears from some recent calculations and estimates, that from the first settlement of America, to the year 1800, the periods of doubling have been but very little above twenty years. See a note on the increase of American population in book ii. chap. xi.

[2] Price's Observ. on Revers. Pay. vol. i. p. 274. Edit. 4to.

unwholesome occupations are little known, the population has been found to double itself in fifteen years.[1] Even this extraordinary rate of increase is probably short of the utmost power of population. Very severe labor is requisite to clear a fresh country; such situations are not in general considered as particularly healthy; and the inhabitants are probably, occasionally, subject to the incursions of the Indians, which may destroy some lives, or at any rate diminish the fruits of their industry.

According to a table of Euler calculated on a mortality of 1 in 36, if the births be to the deaths in the proportion of 3 to 1, the period of doubling will be only 12½ years.[2] And these proportions are not only possible suppositions, but have actually occurred for short periods in more countries than one.

Sir William Petty supposes a doubling possible in so short a time as ten years.[3]

But to be perfectly sure that we are far within the truth, we will take the slowest of these rates of increase, a rate, in which all concurring testi-

[1] Id. p. 282.

[2] See this table at the end of chap. iv. book ii.

[3] Polit. Arith. p. 14.

monies agree, and which has been repeatedly ascertained to be from procreation only.

It may safely be pronounced, therefore; that population when unchecked goes on doubling itself every twenty-five years, or increases in a geometrical ratio.

The rate according to which the productions of the earth may be supposed to increase, it will not be so easy to determine. Of this, however, we may be perfectly certain, that the ratio of their increase must be totally of a different nature from the ratio of the increase of population. A thousand millions are just as easily doubled every twenty-five years by the power of population as a thousand. But the food to support the increase from the greater number will by no means be obtained with the same facility. Man is necessarily confined in room. When acre has been added to acre, till all the fertile land is occupied, the yearly increase of food must depend upon the melioration of the land already in possession. This is a stream, which, from the nature of all soils, instead of increasing, must be gradually diminishing. But population, could it be supplied with food, would go on with unexhausted vigor; and the increase of one period would furnish the

power of a greater increase the next, and this, without any limit.

From the accounts we have of China and Japan, it may be fairly doubted, whether the best directed efforts of human industry could double the produce of these countries even once in any number of years. There are many parts of the globe, indeed hitherto uncultivated, and almost unoccupied; but the right of exterminating, or driving into a corner where they must starve, even the inhabitants of these thinly peopled regions, will be questioned in a moral view. The process of improving their minds and directing their industry would necessarily be slow; and during this time, as population would regularly keep pace with the increasing produce, it would rarely happen that a great degree of knowledge and industry would have to operate at once upon rich unappropriated soil. Even where this might take place, as it does sometimes in new colonies, a geometrical ratio increases with such extraordinary rapidity, that the advantage could not last long. If America continue increasing, which she certainly will do though not with the same rapidity as formerly, the Indians will be driven further and further back

into the country, till the whole race is ultimately exterminated.

These observations are, in a degree, applicable to all the parts of the earth, where the soil is imperfectly cultivated. To exterminate the inhabitants of the greatest part of Asia and Africa, is a thought that could not be admitted for a moment. To civilize and direct the industry of the various tribes of Tartars, and Negroes, would certainly be a work of considerable time, and of variable and uncertain success.

Europe is by no means so fully peopled as it might be. In Europe there is the fairest chance that human industry may receive its best direction. The science of agriculture has been much studied in England and Scotland; and there is still a great portion of uncultivated land in these countries. Let us consider, at what rate the produce of this island might be supposed to increase under circumstances the most favorable to improvement.

If it be allowed, that by the best possible policy, and great encouragements to agriculture, the average produce of the island could be doubled in the first twenty-five years, it will be allowing probably a greater increase than could with reason be expected.

the increase of population and food.

In the next twenty-five years, it is impossible to suppose that the produce could be quadrupled. It would be contrary to all our knowledge of the properties of land. The improvement of the barren parts would be a work of time and labor; and it must be evident to those who have the slightest acquaintance with agricultural subjects, that in proportion as cultivation extended, the additions that could yearly be made to the former average produce must be gradually and regularly diminishing. That we may be the better able to compare the increase of population and food, let us make a supposition, which, without pretending to accuracy, is clearly more favorable to the power of production in the earth, than any experience that we have had of its qualities will warrant.

Let us suppose that the yearly additions which might be made to the former average produce, instead of decreasing, which they certainly would do, were to remain the same; and that the produce of this island might be increased every twenty-five years, by a quantity equal to what it at present produces. The most enthusiastic speculator cannot suppose a greater increase than this. In a few centuries it would make every acre of land in the island like a garden.

If this supposition be applied to the whole earth, and if it be allowed that the subsistence for man which the earth affords, might be increased every twenty-five years by a quantity equal to what it at present produces, this will be supposing a rate of increase much greater than we can imagine that any possible exertions of mankind could make it.

It may be fairly pronounced therefore, that considering the present average state of the earth, the means of subsistence, under circumstances the most favorable to human industry, could not possibly be made to increase faster than in an arithmetical ratio.

The necessary effects of these two different rates of increase, when brought together, will be very striking. Let us call the population of this island eleven millions; and suppose the present produce equal to the easy support of such a number. In the first twenty-five years the population would be twenty-two millions, and the food being also doubled, the means of subsistence would be equal to this increase. In the next twenty-five years, the population would be forty-four millions, and the means of subsistence only equal to the support of thirty-three millions. In the next period the population would be eighty-eight millions,

the increase of population and food.

and the means of subsistence just equal to the support of half of that number. And at the conclusion of the first century, the population would be a hundred and seventy-six millions, and the means of subsistence only equal to the support of fifty-five millions; leaving a population of a hundred and twenty-one millions totally unprovided for.

Taking the whole earth instead of this island, emigration would of course be excluded; and supposing the present population equal to a thousand millions, the human species would increase as the numbers 1, 2, 4, 8, 16, 32, 64, 128, 256, and subsistence as 1, 2, 3, 4, 5, 6, 7, 8, 9. In two centuries the population would be to the means of subsistence as 256 to 9; in three centuries as 4096 to 13, and in two thousand years the difference would be almost incalculable.

In this supposition no limits whatever are placed to the produce of the earth. It may increase for ever, and be greater than any assignable quantity; yet still the power of population being in every period so much superior, the increase of the human species can only be kept down to the level of the means of subsistence by the constant operation of the strong law of necessity acting as a check upon the greater power.

CHAPTER II.

Of the general Checks to Population, and the Mode of their Operation.

THE ultimate check to population appears then to be a want of food arising necessarily from the different ratios according to which population and food increase. But this ultimate check is never the immediate check, except in cases of actual famine.

The immediate check may be stated to consist in all those customs, and all those diseases which seem to be generated by a scarcity of the means of subsistence; and all those causes, independent of this scarcity, whether of a moral or physical nature, which tend prematurely to weaken and destroy the human frame.

These checks to population, which are constantly operating with more or less force in every society, and keep down the number to the level of the means of subsistence, may be classed under two general heads: the preventive, and the positive checks.

The preventive check, as far as it is voluntary, is peculiar to man, and arises from that distinctive superiority in his reasoning faculties, which enables him to calculate distant consequences. The checks to the indefinite increase of plants and irrational animals are all either positive, or, if preventive, involuntary. But man cannot look around him, and see the distress which frequently presses upon those who have large families; he cannot contemplate his present possessions or earnings, which he now nearly consumes himself, and calculate the amount of each share, when with very little addition they must be divided perhaps, among seven or eight, without feeling a doubt, whether if he follow the bent of his inclinations, he may be able to support the offspring which he will probably bring into the world. In a state of equality, if such can exist, this would be the simple question. In the present state of society other considerations occur. Will he not lower his rank in life, and be obliged to give up in great measure his former habits? Does any mode of employment present itself by which he may reasonably hope to maintain a family? Will he not at any rate subject himself to greater difficulties, and more severe labor than in his single

state? Will he not be unable to transmit to his children the same advantages of education and improvement that he had himself possessed? Does he even feel secure that, should he have a large family, his utmost exertions can save them from rags, and squalid poverty, and their consequent degradation in the community? And may he not be reduced to the grating necessity of forfeiting his independence, and of being obliged to the sparing hand of charity for support?

These considerations are calculated to prevent, and certainly do prevent, a great number of persons in all civilized nations from pursuing the dictate of nature in an early attachment to one woman.

If this restraint do not produce vice, it is undoubtedly the least evil that can arise from the principle of population. Considered as a restraint on a strong natural inclination, it must be allowed to produce a certain degree of temporary unhappiness; but evidently slight, compared with the evils which result from any of the other checks to population; and merely of the same nature as many other sacrifices of temporary to permanent gratification, which it

is the business of a moral agent continually to make.

When this restraint produces vice, the evils which follow are but too conspicuous. A promiscuous intercourse to such a degree as to prevent the birth of children seems to lower in the most marked manner the dignity of human nature. It cannot be without its effect on men, and nothing can be more obvious than its tendency to degrade the female character, and to destroy all its most amiable and distinguishing characteristics. Add to which, that among those unfortunate females with which all great towns abound, more real distress and aggravated misery are perhaps to be found, than in any other department of human life.

When a general corruption of morals with regard to the sex pervades all the classes of society, its effects must necessarily be, to poison the springs of domestic happiness, to weaken conjugal and parental affection, and to lessen the united exertions and ardour of parents in the care and education of their children; effects which cannot take place without a decided diminution of the general happiness and virtue of the society; particularly as the necessity of art,

in the accomplishment and conduct of intrigues, and in the concealment of their consequences, necessarily leads to many other vices.

The positive checks to population are extremely various, and include every cause, whether arising from vice or misery, which in any degree contributes to shorten the natural duration of human life. Under this head therefore may be enumerated all unwholesome occupations, severe labor and exposure to the seasons, extreme poverty, bad nursing of children, great towns, excesses of all kinds, the whole train of common diseases and epidemics, wars, plague, and famine.

On examining these obstacles to the increase of population which I have classed under the heads of preventive and positive checks, it will appear that they are all resolvable into moral restraint, vice, and misery.

Of the preventive checks, the restraint from marriage which is not followed by irregular gratifications may properly be termed moral restraint.[1]

[1] It will be observed, that I here use the term *moral* in its most confined sense. By moral restraint I would be understood to mean a restraint from marriage, from pru-

and the mode of their operation.

Promiscuous intercourse, unnatural passions, violations of the marriage bed, and improper arts to conceal the consequences of irregular connexions, are preventive checks that clearly come under the head of vice.

Of the positive checks, those which appear to arise unavoidably from the laws of nature may be called exclusively misery; and those which we obviously bring upon ourselves, such as wars, excesses, and many others which it would be in our power to avoid, are of a mixed nature. They are brought upon us by vice, and their consequences are misery.[1]

---

dential motives, with a conduct strictly moral during the period of this restraint; and I have never intentionally deviated from this sense. When I wished to consider the restraint from marriage unconnected with its consequences, I have either called it prudential restraint, or a part of the preventive check, of which indeed it forms the principal branch.

In my review of the different stages of society, I have been accused of not allowing sufficient weight in the prevention of population to moral restraint; but when the confined sense of the term, which I have here explained, is adverted to, I am fearful that I shall not be found to have erred much in this respect. I should be very glad to believe myself mistaken.

[1] As the general consequence of vice is misery, and as this consequence is the precise reason why an action is

Of the general checks to population,

The sum of all these preventive and positive checks taken together forms the immediate check to population, and it is evident that in every country where the whole of the procreative power cannot be called into action, the preventive and the positive checks must vary inversely as each other, that is, in countries either naturally unhealthy, or subject to a great mortality from whatever cause it may arise, the preventive check will prevail very little. In those countries on the contrary which

termed vicious, it may appear that the term misery alone would be here sufficient, and that it is superfluous to use both. But the rejection of the term vice, would introduce a considerable confusion into our language and ideas. We want it particularly to distinguish that class of actions, the general tendency of which is to produce misery, but which, in their immediate or individual effects, may produce perhaps exactly the contrary. The gratification of all our passions in its immediate effect is happiness, not misery; and in individual instances, even the remote consequences (at least in this life) come under the same denomination. I have little doubt that there have been some irregular connexions with women, which have added to the happiness of both parties, and have injured no one. These individual actions therefore cannot come under the head of misery. But they are still evidently vicious, because an action is so denominated, the general tendency of which is to produce misery, whatever may be its individual effect; and no person can doubt the general tendency of an illicit intercourse between the sexes, to injure the happiness of society.

are naturally healthy, and where the preventive check is found to prevail with considerable force, the positive check will prevail very little, or the mortality be very small.

In every country some of these checks are, with more or less force, in constant operation; yet notwithstanding their general prevalence, there are few states in which there is not a constant effort in the population to increase beyond the means of subsistence. This constant effort as constantly tends to subject the lower classes of society to distress, and to prevent any great permanent melioration of their condition.

These effects, in the present state of society, seem to be produced in the following manner. We will suppose the means of subsistence in any country just equal to the easy support of its inhabitants. The constant effort towards population, which is found to act even in the most vicious societies, increases the number of people before the means of subsistence are increased. The food therefore which before supported eleven millions, must now be divided among eleven millions and a half. The poor consequently must live much worse, and many of them be reduced to severe distress. The number of laborers also being

above the proportion of work in the market, the price of labor must tend to fall; while the price of provisions would at the same time tend to rise. The laborer therefore must do more work, to earn the same as he did before. During this season of distress the discouragements to marriage, and the difficulty of rearing a family are so great, that population is nearly at a stand. In the mean time the cheapness of labor, the plenty of laborers, and the necessity of an increased industry among them, encourage cultivators to employ more labor upon their land, to turn up fresh soil, and to manure and improve more completely what is already in tillage; till ultimately the means of subsistence may become in the same proportion to the population, as at the period from which we set out. The situation of the laborer being then again tolerably comfortable, the restraints to population are in some degree loosened; and, after a short period, the same retrograde and progressive movements, with respect to happiness, are repeated.

This sort of oscillation will not probably be obvious to common view; and it may be difficult even for the most attentive observer to calculate its periods. Yet that, in the generality of old states,

some such vibration does exist, though in a much less marked, and in a much more irregular manner, than I have described it, no reflecting man who considers the subject deeply can well doubt.

One principal reason why this oscillation has been less remarked, and less decidedly confirmed by experience than might naturally be expected, is, that the histories of mankind which we possess are, in general, histories only of the higher classes. We have not many accounts, that can be depended upon, of the manners and customs of that part of mankind, where these retrograde and progressive movements chiefly take place. A satisfactory history of this kind, of one people and of one period, would require the constant and minute attention of many observing minds in local and general remarks on the state of the lower classes of society, and the causes that influenced it; and to draw accurate inference upon this subject, a succession of such historians for some centuries would be necessary. This branch of statistical knowledge has of late years been attended to in some countries,[1] and we may pro-

[1] The judicious questions which Sir John Sinclair circulated in Scotland, and the very valuable accounts which he has collected in that part of the island, do him the

mise ourselves a clearer insight into the internal structure of human society from the progress of these inquiries. But the science may be said yet to be in its infancy, and many of the objects, on which it would be desirable to have information, have been either omitted or not stated with sufficient accuracy. Among these perhaps may be reckoned, the proportion of the number of adults to the number of marriages; the extent to which vicious customs have prevailed in consequence of the restraints upon matrimony; the comparative

highest honor; and these accounts will ever remain an extraordinary monument of the learning, good sense, and general information of the clergy of Scotland. It is to be regretted that the adjoining parishes are not put together in the work, which would have assisted the memory both in attaining and recollecting the state of particular districts. The repetitions and contradictory opinions which occur are not in my opinion so objectionable, as, to the result of such testimony, more faith may be given than we could possibly give to the testimony of any individual. Even were this result drawn for us by some master hand, though much valuable time would undoubtedly be saved, the information would not be so satisfactory. If with a few subordinate improvements, this work had contained accurate and complete registers for the last 150 years, it would have been inestimable, and would have exhibited a better picture of the internal state of a country, than has yet been presented to the world. But this last most essential improvement no diligence could have effected.

and the mode of their operation.

mortality among the children of the most distressed part of the community, and of those who live rather more at their ease; the variations in the real price of labor; the observable differences in the state of the lower classes of society with respect to ease and happiness, at different times during a certain period; and very accurate registers of births, deaths, and marriages, which are of the utmost importance in this subject.

A faithful history including such particulars would tend greatly to elucidate the manner in which the constant check upon population acts; and would probably prove the existence of the retrograde and progressive movements that have been mentioned; though the times of their vibration must necessarily be rendered irregular from the operation of many interrupting causes; such as, the introduction of or failure of certain manufactures, a greater or less prevalent spirit of agricultural enterprise; years of plenty, or years of scarcity; wars, sickly seasons, poor laws, emigration, and other causes of a similar nature.

A circumstance which has perhaps more than any other contributed to conceal this oscillation from common view is, the difference between the nominal and real price of labor. It very rarely

happens that the nominal price of labor universally falls; but we well know that it frequently remains the same, while the nominal price of provisions has been gradually rising. This is, in effect, a real fall in the price of labor; and, during this period, the condition of the lower classes of the community must be gradually growing worse. But the farmers and capitalists are growing rich from the real cheapness of labor. Their increasing capitals enable them to employ a greater number of men; and, as the population had probably suffered some check from the greater difficulty of supporting a family, the demand for labor, after a certain period, would be great in proportion to the supply, and its price would of course rise, if left to find its natural level; and thus the wages of labor, and consequently the condition of the lower classes of society, might have progressive and retrograde movements, though the price of labor might never nominally fall.

In savage life, where there is no regular price of labor, it is little to be doubted that similar oscillations take place. When population has increased nearly to the utmost limits of the food, all the preventive and the positive checks will naturally operate with increased force. Vicious habits with respect to the sex will be more general, the

and the mode of their operation.

exposing of children more frequent, and both the probability and fatality of wars and epidemics will be considerably greater; and these causes will probably continue their operation till the population is sunk below the level of the food; and then the return to comparative plenty will again produce an increase, and, after a certain period, its further progress will again be checked by the same causes.[1]

But without attempting to establish these progressive and retrograde movements in different countries, which would evidently require more minute histories than we possess, and which the progress of civilization naturally tends to counteract, the following propositions are intended to be proved:

1. Population is necessarily limited by the means of subsistence.

2. Population invariably increases, where the

[1] Sir James Steuart very justly compares the generative faculty to a spring loaded with a variable weight, [Polit. Econ. vol i. b. i. c. 4. p. 20.] which would of course produce exactly that kind of oscillation which has been mentioned. In the first book of his Political Economy, he has explained many parts of the subject of population very ably.

means of subsistence increase, unless prevented by some very powerful and obvious checks.[1]

3. These checks, and the checks which repress the superior power of population, and keep its effects on a level with the means of subsistence, are all resolvable into moral restaint, vice, and misery.

The first of these propositions scarcely needs illustration. The second and third will be sufficiently established by a review of the immediate checks to population in the past and present state of society.

This review will be the subject of the following chapters.

---

[1] I have expressed myself in this cautious manner, because I believe there are a very few instances, such as the negroes in the West Indies, and one or two others, where population does not keep up to the level of the means of subsistence. But these are extreme cases; and generally speaking it might be said (and the propositions in this form would be more neatly and distinctly expressed.)

2. Population always increases where the means of subsistence increase.

3. The checks which repress the superior power of population, and keep its effects on a level with the means of subsistence are all resolvable into moral restraint, vice, and misery.

CHAPTER III.

Of the Checks to Population in the lowest stage of Human society.

THE wretched inhabitants of Tierra del Fuego have been placed by the general consent of voyagers at the bottom of the scale of human beings.[1] Of their domestic habits and manners, however, we have few accounts. Their barren country, and the miserable state in which they live, have prevented any intercourse with them that might give such information; but we cannot be at a loss to conceive the checks to population among a race of savages, whose very appearance indicates them to be half starved, and who, shivering with cold, and covered with filth and vermin, live in one of the most inhospitable climates in the world, without having sagacity enough to provide themselves with such conveniencies as might mitigate its severities, and render life in some measure more comfortable.[2]

---

[1] Cook's First Voy. vol. ii. p. 59.

[2] Second Voy. vol. ii. p. 186.

Next to these, and almost as low in genius and resources, have been placed the natives of Van Diemen's land;[1] but some late accounts have represented the islands of Andaman in the east as inhabited by a race of savages still lower in wretchedness even than these. Every thing that voyages have related of savage life is said to fall short of the barbarism of this people. Their whole time is spent in search of food; and as their woods yield them few or no supplies of animals, and but little vegetable diet, their principal occupation is that of climbing the rocks, or roving along the margin of the sea, in search of a precarious meal of fish, which, during the tempestuous season, they often seek for in vain. Their stature seldom exceeds five feet, their bellies are protuberant, with high shoulders, large heads, and limbs disproportionably slender. Their countenances exhibit the extreme of wretchedness, a horrid mixture of famine and ferocity; and their extenuated and diseased figures plainly indicate the want of wholesome nourishment. Some of these unhappy beings have been found on the shores in the last stage of famine.[2]

[1] Vancouver's Voy. vol. ii. b. iii. c. i. p. 13.

[2] Symes' Embassy to Ava, ch. i. p. 129. and Asiatic Researches, vol. iv. p. 401.

the lowest stage of human society.

In the next scale of human beings we may place the inhabitants of New Holland, of a part of whom we have some accounts that may be depended upon, from a person who resided a considerable time at Port Jackson, and had frequent opportunities of being a witness to their habits and manners. The narrator of captain Cook's first voyage having mentioned the very small number of inhabitants that was seen on the eastern coast of New Holland, and the apparent inability of the country, from its desolate state, to support many more, observes, "By what means the inhabitants "of this country are reduced to such a number "as it can subsist, is not perhaps very easy to "guess; whether, like the inhabitants of New "Zealand, they are destroyed by the hands of each "other in contests for food, whether they are "swept off by accidental famine, or whether there "is any cause that prevents the increase of the "species, must be left for future adventurers to "determine." [1]

The account which Mr. Collins has given of these savages will, I hope, afford in some degree a satisfactory answer. They are described as, in

[1] Cook's First Voy. vol. iii. p. 240.

general, neither tall nor well made. Their arms, legs, and thighs, are thin, which is ascribed to the poorness of their mode of living. Those who inhabit the sea coast depend almost entirely on fish for their sustenance, relieved occasionally by a repast on some large grubs which are found in the body of the dwarf gum tree. The very scanty stock of animals in the woods, and the very great labor necessary to take them, keep the inland natives in as poor a condition as their brethren on the coast. They are compelled to climb the tallest trees after honey, and the smaller animals, such as the flying squirrel and the opossum. When the stems are of great height, and without branches, which is generally the case in thick forests, this is a process of great labor, and is effected by cutting a notch with their stone hatchets for each foot successively, while their left arm embraces the tree. Trees were observed notched in this manner to the height of eighty feet before the first branch, where the hungry savage could hope to meet with any reward for so much toil.[1]

The woods, exclusive of the animals occasion-

[1] Collins's account of New South Wales, Appendix. p. 549. 4to

ally found in them, afford but little sustenance. A few berries, the yam, the fern root, and the flowers of the different banksias, make up the whole of the vegetable catalogue.[1]

A native with his child, surprised on the banks of the Hawksbury river, by some of our colonists, launched his canoe in a hurry, and left behind him a specimen of his food, and of the delicacy of his stomach. From a piece of watersoaking wood, full of holes, he had been extracting and eating a large worm. The smell both of the worm and its habitation was in the highest degree offensive. These worms, in the language of the country, are called cah-bro; and a tribe of natives dwelling inland, from the circumstance of eating these loathsome worms, is named Cah-brogal. The wood natives also make a paste, formed of the fern root, and the large and small ants bruised together, and, in the season, add the eggs of this insect.[2]

In a country, the inhabitants of which are driven to such resources for subsistence, where the supply of animal and vegetable food is so extremely

[1] Collins' Account of New South Wales, Appendix, p. 557. 4to.

[2] Id. Appen. p. 558.

scanty, and the labor necessary to procure it is so severe, it is evident, that the population must be very thinly scattered in proportion to the territory. Its utmost bounds must be very narrow. But when we advert to the strange and barbarous customs of these people, the cruel treatment of their women, and the difficulty of rearing children; instead of being surprised that it does not more frequently press to pass these bounds, we shall be rather inclined to consider even these scanty resources as more than sufficient to support all the population that could grow up under such circumstances.

The prelude to love in this country is violence, and of the most brutal nature. The savage selects his intended wife from the women of a different tribe, generally one at enmity with his own. He steals upon her in the absence of her protectors, and having first stupified her with blows of a club, or wooden sword, on the head, back, and shoulders, every one of which is followed by a stream of blood, he drags her through the woods by one arm, regardless of the stones and broken pieces of trees that may lie in his route, and anxious only to convey his prize in safety to his own party, where a most brutal scene ensues.

the lowest stage of human society.

'he woman thus treated becomes his wife, and
; incorporated into the tribe to which he belongs,
nd but seldom quits him for another. The out-
ıge is not resented by the relations of the female,
'ho only retaliate by a similar outrage when it is
ı their power.'

The union of the sexes takes place at an early
ge, and instances were known to our colonists
f very young girls having been much and shame-
ully abused by the males.'

The conduct of the husband to his wife, or
'ives, seems to be nearly in character with this
range and barbarous mode of courtship. The
nales bear on their heads the traces of the su-
iority of the males, which is exercised almost
soon as they find strength in their arms to in-
a blow. Some of these unfortunate beings
: been observed with more scars on their
ı heads cut in every direction, than could
be counted. Mr. Collins feelingly says,
: condition of these women is so wretched,
I have often, on seeing a female child
e on its mother's shoulders, anticipated the

ıs' N. S. Wales, Appen. p. 559.
n. p. 563.

" miseries to which it was born, and thought it " would be a mercy to destroy it."[1] In another place, speaking of Bennilong's wife being delivered of a child, he says, " I here find in my pa- " pers a note that for some offence Bennilong had " severely beaten this woman in the morning, a " short time before she was delivered."[2]

Women treated in this brutal manner must necessarily be subject to frequent miscarriages, and it is probable that the abuse of very young girls, mentioned above as common, and the too early union of the sexes in general, would tend to prevent the females from being prolific. Instances of a plurality of wives were found more frequent than of a single wife; but what is extraordinary, Mr. Collins did not recollect ever to have noticed children by more than one. He had heard from some of the natives, that the first wife claimed an exclusive right to the conjugal embrace, while the second was merely the slave and drudge of both.[3]

An absolutely exclusive right in the first wife to the conjugal embrace seems to be hardly pro-

[1] Collins' N. S. Wales, Appen. p. 583.
[2] Appen. p. 562.
[3] Appen. p. 560.

the lowest stage of human society.

bable; but it is possible that the second wife might not be allowed to rear her offspring. At any rate, if the observation be generally true, it proves that a great part of the women are without children, which can only be accounted for from the very severe hardships which they undergo, or from some particular customs which may not have come to the knowledge of Mr. Collins.

If the mother of a sucking child die, the helpless infant is buried alive in the same grave with its mother. The father himself places his living child on the body of his dead wife, and having thrown a large stone upon it, the grave is instantly filled by the other natives. This dreadful act was performed by Co-le-be, a native well known to our colonists, and who, on being talked to on the subject, justified the proceeding, by declaring that no woman could be found who would undertake to nurse the child, and that therefore it must have died a much worse death than that which he had given it. Mr. Collins had reason to believe that this custom was generally prevalent, and observes, that it may in some measure account for the thinness of the population.[1]

[1] Collins' N. S. Wales, Appendix, p. 607.

Such a custom, though in itself perhaps it might not much affect the population of a country, places in a strong point of view the difficulty of rearing children in savage life. Women obliged by their habits of living to a constant change of place, and compelled to an unremitting drudgery for their husbands, appear to be absolutely incapable of bringing up two or three children nearly of the same age. If another child be born before the one above it can shift for itself, and follow its mother on foot, one of the two must almost necessarily perish for want of care. The task of rearing even one infant, in such a wandering and laborious life, must be so troublesome and painful, that we are not to be surprised that no woman can be found to undertake it who is not prompted by the powerful feelings of a mother.

To these causes, which forcibly repress the rising generation, must be added those which contribute subsequently to destroy it; such as the frequent wars of these savages with different tribes, and their perpetual contests with each other; their strange spirit of retaliation and revenge which prompts the midnight murder, and the frequent shedding of innocent blood; the

the lowest stage of human society.

smoke and filth of their miserable habitations, and their poor mode of living, productive of loathsome cutaneous disorders; and above all, a dreadful epidemic like the small-pox, which sweeps off great numbers.[1]

In the year 1789, they were visited by this epidemic which raged among them with all the appearance and virulence of the small-pox. The desolation that it occasioned was almost incredible. Not a living person was to be found in the bays and harbors that were before the most frequented. Not a vestige of a human foot was to be traced on the sands. They had left the dead to bury the dead. The excavations in the rocks were filled with putrid bodies, and in many places the paths were covered with skeletons.[2]

Mr. Collins was informed, that the tribe of Cole-be, the native mentioned before, had been reduced by the effects of this dreadful disorder to three persons, who found themselves obliged to unite with some other tribe to prevent their utter extinction.[3]

[1] See generally, the Appendix to Collins' Account of the English colony in New South Wales.

[2] Collins' N. S. Wales, Appendix, p. 597.

[3] Id. Appendix, p. 598.

Under such powerful causes of depopulation, we should naturally be inclined to suppose that the animal and vegetable produce of the country would be increasing upon the thinly scattered inhabitants, and, added to the supply of fish from their shores, would be more than sufficient for their consumption; yet it appears upon the whole, that the population is in general so nearly on a level with the average supply of food, that every little deficiency from unfavorable weather, or other causes, occasions distress. Particular times, when the inhabitants seemed to be in great want, are mentioned as not uncommon, and at these periods, some of the natives were found reduced to skeletons, and almost starved to death.[1]

[1] Collins' N. S. Wales, c. iii. p. 34, and Appendix, p. 551.

CHAPTER IV.

Of the Checks to Population among the American Indians.

WE may next turn our view to the vast continent of America, the greatest part of which was found to be inhabited by small independent tribes of savages, subsisting nearly like the natives of New Holland, on the productions of unassisted nature. The soil was covered by an almost universal forest, and presented few of those fruits and esculent vegetables which grow in such profusion in the islands of the South Sea. The produce of a most rude and imperfect agriculture, known to some of the tribes of hunters, was so trifling as to be considered only as a feeble aid to the subsistence acquired by the chace. The inhabitants of this new world, therefore, might be considered as living principally by hunting and fishing;[1] and the narrow limits of this mode of subsistence are obvious. The supplies derived from fishing could

[1] Robertson's History of America, vol. ii. b. iv. p. 127. et seq. octavo edit. 1780.

extend only to those who were within a certain distance of the lakes, the rivers, or the sea-shore; and the ignorance and indolence of the improvident savage would frequently prevent him from extending the benefits of these supplies much beyond the time when they were actually obtained. The great extent of territory required for the support of the hunter has been repeatedly stated and acknowledged.[1] The number of wild animals within his reach, combined with the facility with which they might be either killed or ensnared, must necessarily limit the number of his society. The tribes of hunters, like beasts of prey, whom they resemble in their mode of subsistence, will consequently be thinly scattered over the surface of the earth. Like beasts of prey, they must either drive away or fly from every rival, and be engaged in perpetual contests with each other.[2]

Under such circumstances, that America should be very thinly peopled in proportion to its extent of territory, is merely an exemplification of the obvious truth, that population cannot increase without the food to support it.

[1] Franklin's Micell. p. 2.

[2] Robertson, b. iv. p. 129.

among the American Indians.

But the interesting part of the inquiry, that part to which I would wish particularly to draw the attention of the reader, is, the mode by which the population is kept down to the level of this scanty supply. It cannot escape observation, that an insufficient supply of food to any people, does not show itself merely in the shape of famine, but in other more permanent forms of distress, and in generating certain customs, which operate sometimes with greater force in the suppression of a rising population, than in its subsequent destruction.

It was generally remarked, that the American women were far from being prolific, their marriages seldom producing above two or three children.[1] This unfruitfulness has been attributed by some to a want of ardor in the men towards their women, a feature of character, which has been considered as peculiar to the American savage. It is not however peculiar to this race;

[1] Robertson, b. iv. p. 106. Burke's America, vol. i. p. 187. Charlevoix, Hist. de la Nouvelle France, tom. iii. p. 304. Lafitau, Mœurs des Sauvages, tom. i. p. 590. In the course of this chapter I often give the same references as Robertson; but never, without having examined and verified them myself. Where I have not had an opportunity of doing this, I refer to Robertson alone.

but probably exists in a great degree among all barbarous nations, whose food is poor and insufficient, and who live in a constant apprehension of being pressed by famine, or by an enemy. Bruce frequently takes notice of it, particularly in reference to the Galla and Shangalla, savage nations on the borders of Abyssinia,[1] and le Vaillant mentions the phlegmatic temperament of the Hottentots as the chief reason of their thin population.[2] It seems to be generated by the hardships and dangers of savage life, which take off the attention from the sexual passion. And that these are the principal causes of it among the Americans, rather than any absolute constitutional defect, appears probable, from its diminishing nearly in proportion to the degree in which these causes are mitigated or removed. In those countries of America, where from peculiar situation or further advantages in improvement, the hardships of savage life are less severely felt, the passion between the sexes becomes more ardent. Among some of the tribes seated on the banks of rivers well stored with fish, or others that inhabit a territory

[1] Travels to discover the source of the Nile, vol. ii. p. 223, 559.

[2] Voyage dans l'Interieur de l'Afrique, tom. i. p. 12, 13.

among the American Indians.

greatly abounding in game or much improved in agriculture, the women are more valued and admired; and as hardly any restraint is imposed on the gratification of desire, the dissolution of their manners is sometimes excessive.[1]

If we do not then consider this apathy of the Americans as a natural defect in the bodily frame, but merely as a general coldness, and an infrequency of the calls of the sexual appetite, we shall not be inclined to give much weight to it as affecting the number of children to a marriage; but shall be disposed to look for the cause of this unfruitfulness in the condition and customs of the women in a savage state. And here we shall find reasons amply sufficient to account for the fact in question.

It is finely observed by Dr. Robertson, that "Whether man has been improved by the progress of arts and civilization, is a question which "in the wantonness of disputation has been agitated among philosophers. That women are "indebted to the refinement of polished manners

[1] Robertson, b. iv. p. 71. Lettres Edif. & Curieuses, tom. vi. p. 48, 322, 330, tom. vii. p. 20. 12mo. edit. 1780. Charlevoix, tom. iii. p. 303, 423. Hennepin, Mœurs des Sauvages, p. 37.

" for a happy change in their state, is a point " which can admit of no doubt."[1] In every part of the world, one of the most general characteristics of the savage is to despise and degrade the female sex.[2] Among most of the tribes in America their condition is so peculiarly grievous, that servitude is a name too mild to describe their wretched state. A wife is no better than a beast of burden. While the man passes his days in idleness or amusement, the woman is condemned to incessant toil. Tasks are imposed upon her without mercy, and services are received without complacence or gratitude.[3] There are some districts in America where this state of degradation has been so severely felt, that mothers have destroyed their female infants, to deliver them at once from a life in which they were doomed to such a miserable slavery.[4]

---

[1] Robertson, b. iv. p. 103.

[2] Robertson, b. iv. p. 103. Lettres Edif. passim. Charlevoix Hist. Nouv. Fr. tom. iii. p. 287. Voy. de Pérouse, c. ix. p. 402. 4to. London.

[3] Robertson, b. iv. p. 105. Lettres Edif. tom. vi. p. 329. Major Roger's North America, p. 211. Creuxii Hist. Canad. p. 57.

[4] Robertson, b. iv. p. 106. Raynal Hist. des Indes, tom. iv. c. vii. p. 110. 8vo. 10 vol. 1795.

among the American Indians.

This state of depression and constant labor added to the unavoidable hardships of savage life must be very unfavorable to the office of child-bearing;[1] and the libertinage which generally prevails among the women before marriage, with the habit of procuring abortions, in which they rarely fail, must necessarily render them more unfit for bearing children afterwards.[2] One of the missionaries speaking of the common practice among the Natchez of changing their wives, adds, unless they have children by them; a proof, that these marriages were in general unfruitful, which may be accounted for from the libertine lives of the women before wedlock, which he had previously noticed.[3]

The causes, that Charlevoix assigns, of the sterility of the American women, are, the suckling their children for several years, during which time they do not cohabit with their husbands; the excessive labor to which they are always condemned in whatever situation they may be; and

[1] Robertson, b. iv. p. 106. Creuxii Hist. Canad. p. 57. Lafitau, tom. i. p. 590.

[2] Robertson, b. iv. p. 72. Ellis' Voyage, p. 198. Burke's America, vol. 1. p. 387.

[3] Lettres Edif. tom. vii. p. 20, 22.

the custom established in many places of permitting the young women to prostitute themselves before marriage. Added to this, he says, the extreme misery to which these people are sometimes reduced, takes from them all desire of having children.[1] Among some of the ruder tribes it is a maxim not to burden themselves with rearing more than two of their offspring.[2] When twins are born, one of them is commonly abandoned, as the mother cannot rear them both; and when a mother dies during the period of suckling her child, no chance of preserving its life remains, and, as in New Holland, it is buried in the same grave with the breast that nourished it.[3]

As the parents are frequently exposed to want themselves, the difficulty of supporting their children becomes at times so great, that they are reduced to the necessity of abandoning or destroying them.[4] Deformed children are very generally exposed; and among some of the tribes in South America, the children of mothers who do

Charlevoix, N. Fr. tom. iii. p. 304.

[1] Robertson, b. iv. p. 107. Lettres Edif. tom. ix. p. 140.

[2] Robertson, b. iv. p. 107. Lettres Edif. tom. viii. p. 86.

[3] Robertson, b. iv. p. 108.

among the American Indians.

not bear their labors well experience a similar fate, from a fear that the offspring may inherit the weakness of its parent.[1]

To causes of this nature we must ascribe the remarkable exemption of the Americans from deformities of make. Even when a mother endeavors to rear all her children without distinction, so great a proportion of the whole number perishes under the rigorous treatment that must be their lot in the savage state, that probably none of those who labor under any original weakness or infirmity can attain the age of manhood. If they be not cut off as soon as they are born, they cannot long protract their lives under the severe discipline that awaits them. In the Spanish provinces, where the Indians do not live so laborious a life, and are prevented from destroying their children, great numbers of them are deformed, dwarfish, mutilated, blind, and deaf.[2]

Polygamy seems to have been generally allowed among the Americans, but the privilege was seldom used, except by the caciques and chiefs,

[1] Lafitau, Mœurs de Sauv. tom. i. p. 592.

[2] Charlevoix, tom. iii. p. 303. Raynal, Hist. des Indes, tom. viii. l. xv. p. 22.

[3] Robertson, b. iv. p. 73. Voyage d'Ulloa, tom. i. p. 232.

and now and then by others in some of the fertile provinces of the south, where subsistence was more easily procured. The difficulty of supporting a family confined the mass of the people to one wife;[1] and this difficulty was so generally known and acknowledged, that fathers, before they consented to give their daughters in marriage, required unequivocal proofs in the suitor of his skill in hunting, and his consequent ability to support a wife and children.[2] The women, it is said, do not marry early;[3] and this seems to be confirmed by the libertinage among them before marriage, so frequently taken notice of by the missionaries and other writers.[4]

The customs above enumerated, which appear to have been generated principally by the experience of the difficulties attending the rearing of a family, combined with the great proportion of children that must necessarily perish under the

[1] Robertson, b. iv. p. 102. Lettres Edif. tom. viii. p. 87.

[2] Lettres Edif. tom. ix. p. 364. Robertson, b. iv. p. 115.

[3] Robertson, b. iv. p. 107.

[4] Lettres Edif. passim. Voyage d'Ulloa, tom. i. p. 343. Burke's America, vol. i. p. 187. Charlevoix, tom. iii. p. 303, 304.

among the American Indians.

hardships of savage life, in spite of the best efforts of their parents to save them,[1] must, without doubt, most powerfully repress the rising generation.

When the young savage, by a fortunate train of circumstances, has passed safely through the perils of his childhood, other dangers scarcely less formidable await him on his approach to manhood. The diseases to which man is subject in the savage state, though fewer in number, are more violent and fatal than those which prevail in civilized society. As savages are wonderfully improvident, and their means of subsistence always precarious, they often pass from the extreme of want to exuberant plenty, according to the vicissitudes of fortune in the chace, or to the variety in the productions of the seasons.[2] Their inconsiderate gluttony in the one case, and their severe abstinence in the other, are equally prejudicial to the human constitution; and their vigor is accordingly at some seasons impaired by want, and at others by a superfluity of gross aliment,

[1] Creuxius says, that scarcely one in thirty reaches manhood (Hist. Canad. p. 57,); but this must be a great exaggeration.

[2] Robertson, b. iv. p. 85.

and the disorders arising from indigestions.[1] These, which may be considered as the unavoidable consequence of their mode of living, cut off considerable numbers in the prime of life. They are likewise extremely subject to consumptions, to pleuritic, asthmatic, and paralytic disorders, brought on by the immoderate hardships and fatigues which they endure in hunting and war, and by the inclemency of the seasons to which they are continually exposed.[2]

The missionaries speak of the Indians in South America as subject to perpetual diseases for which they know no remedy.[3] Ignorant of the use of the most simple herbs, or of any change in their gross diet, they die of these diseases in great numbers. The jesuit Fauque says, that in all the different excursions which he had made, he scarcely found a single individual of an advanced age.[4] Robertson determines the period of human life to be shorter among savages than in well regulated and industrious communities.[5] Raynal, not-

[1] Charlevoix. tom. iii. p. 302, 303.

[2] Robertson, b. iv. p. 86. Charlevoix, tom. iii. p. 364. Lafitau, tom. ii. p. 360, 361.

[3] Lettres Edif. tom. viii. p. 83.

[4] Lettres Edif. tom. vii. p. 317. et. seq.

[5] b. iv. p. 86.

withstanding his frequent declamations in favor of savage life, says of the Indians of Canada, that few are so long-lived as our people, whose manner of living is more uniform and tranquil.[1] And Cook and Pérouse confirm these opinions in the remarks which they make on some of the inhabitants of the northwest coast of America.[2]

In the vast plains of South America, a burning sun operating on the extensive swamps and the inundations that succeed the rainy season, sometimes generates dreadful epidemics. The missionaries speak of contagious distempers as frequent among the Indians, and occasioning at times a great mortality in their villages.[3] The small-pox every where makes great ravages, as, from want of care and from confined habitations, very few that are attacked recover from it.[4] The Indians of Paraguay are said to be extremely subject to contagious distempers, notwithstanding the care and attentions of the Jesuits. The small-pox and malignant fevers, which, from the ravages they

[1] Raynal, b. xv. p. 23.

[2] Cook, Third Voy. vol. iii. chap. ii. p. 520. Voy. de Pérouse, chap. ix.

[3] Lettres Edif. tom. viii. p. 79, 339; tom. ix. p. 125.

[4] Voyage d'Ulloa, tom. i. p. 349.

make, are called plagues, frequently desolate these flourishing missions, and according to Ulloa, were the cause that they had not increased in proportion to the time of their establishment, and the profound peace which they had enjoyed.[1]

These epidemics are not confined to the south. They are mentioned as if they were not uncommon among the more northern nations; and, in a late voyage to the northwest coast of America, captain Vancouver gives an account of a very extraordinary desolation apparently produced by some distemper of this kind. From New Dungeness he traversed a hundred and fifty miles of the coast without seeing the same number of inhabitants. Deserted villages were frequent, each of which was large enough to contain all the scattered savages that had been observed in that extent of country. In the different excursions which he made, particularly about Port Discovery, the skulls, limbs, ribs, and back-bones, or some other vestiges of the human body, were scattered promiscuously in great numbers; and, as no warlike scars were observed on the bodies of the remaining Indians, and no particular signs

[1] Voyage d'Ulloa, tom. i. p. 549.

[2] Lettres Edif. tom. vi. p. 335.

among the American Indians.

of fear and suspicion, the most probable conjecture seems to be, that this depopulation must have been occasioned by pestilential disease.[1] The small-pox appears to be common and fatal among the Indians on this coast. Its indelible marks were observed on many, and several had lost the sight of one eye from it.[2]

In general, it may be remarked of savages, that, from their extreme ignorance, the dirt of their persons, and the closeness and filth of their cabins,[3] they lose the advantage which usually attends a thinly peopled country, that of being more exempt from pestilential diseases, than those which are fully inhabited. In some parts of America the houses are built for the reception of many different families, and fourscore or a hundred people are crowded together under the same roof. When the families live separately, the huts

[1] Vancouver's Voy. vol. i. b. ii. c. v. p. 256.

[2] Id. c. iv. p. 242.

[3] Charlevoix speaks in the strongest terms of the extreme filth and stench of the American cabins, "On ne peut entrer dans leur cabanes qu'on ne soit impeste;" and the dirt of their meals, he says, "vous feroit horreur." Vol. iii. p. 338.

are extremely small, close, and wretched, without windows, and with the doors so low, that it is necessary to creep on the hands and knees to enter them.[1] On the northwest coast of America, the houses are in general of the large kind; and Meares describes one of most extraordinary dimensions belonging to a chief near Nootka Sound, in which eight hundred persons ate, sat, and slept.[2] All voyagers agree with respect to the filth of the habitations, and the personal nastiness of the people on this coast.[3] Captain Cook describes them as swarming with vermin, which they pick off and eat;[4] and the nastiness and stench of their houses, he says, is equal to their confusion.[5] Pérouse declares that their cabins have a nastiness and stench, to which the den of no known animal in the world can be compared.[6]

Under such circumstances, it may be easily imagined what a dreadful havoc an epidemic must make, when once it appears among them; and it does not seem improbable, that the degree

[1] Robertson, b. iv. p. 182. Voyage d'Ulloa, tom. i. p. 340

[2] Meares' Voyage, ch. xii. p. 138.

[3] Id. ch. xxiii. p. 252. Vancouver's Voy. vol. iii. b. vi. c. i. p. 313.

[4] Cook's Third Voyage, vol. ii. p. 305.

[5] c. iii. p. 316.

[6] Voy. de Pérouse, ch. ix. p. 403.

among the American Indians.

of filth described should generate distempers of this nature, as the air of their houses cannot be much purer than the atmosphere of the most crowded cities.

Those who escape the dangers of infancy and of disease are constantly exposed to the chances of war; and notwithstanding the extreme caution of the Americans in conducting their military operations, yet as they seldom enjoy any interval of peace, the waste of their numbers in war is considerable.[1] The rudest of the American nations are well acquainted with the rights of each community to its own domains.[2] And as it is of the utmost consequence to prevent others from destroying the game in their hunting grounds, they guard this national property with a jealous attention. Innumerable subjects of dispute necessarily arise. The neighboring nations live in a perpetual state of hostility with each other.[3] The very act of increasing in one tribe must be an act of aggression on its neighbors, as a larger

[1] Charlevoix, Hist. N. Fr. tom. iii. 202, 203, 429.

[2] Robertson, b. iv. p. 147.

[3] Ibid. Lettres Edif. tom. viii. p. 40, 86, & passim. Cook's Third Voy. vol. ii. p. 324. Meares' Voy. ch. xxiv. p. 267.

range of territory will be necessary to support its increased numbers. The contest will in this case naturally continue, either till the equilibrium is restored by mutual losses, or till the weaker party is exterminated, or driven from its country. When the irruption of an enemy desolates their cultivated lands, or drives them from their hunting grounds, as they have seldom any portable stores, they are generally reduced to extreme want. All the people of the district invaded are frequently forced to take refuge in woods or mountains which can afford them no subsistence, and where many of them perish. In such a flight each consults alone his individual safety. Children desert their parents, and parents consider their children as strangers. The ties of nature are no longer binding. A father will sell his son for a knife or a hatchet.[2] Famine and distresses of every kind complete the destruction of those whom the sword had spared; and in this manner whole tribes are frequently extinguished.[3]

Such a state of things has powerfully contri-

[1] Robertson, b. iv. p. 172. Charlevoix, N. Fr. tom. iii. p. 203.

[2] Lettres Edif. tom. viii. p. 346.

[3] Robertson, b. iv. p. 172. Account of N. America, by Major Rogers, p. 250.

among the American Indians.

buted to generate that ferocious spirit of warfare observable among savages in general, and most particularly among the Americans. Their object in battle is not conquest, but destruction.[1] The life of the victor depends on the death of his enemy; and, in the rancor and fell spirit of revenge with which he pursues him, he seems constantly to bear in mind the distresses that would be consequent on defeat. Among the Iroquois, the phrase by which they express their resolution of making war against an enemy, is, "Let us go and eat that nation." If they solicit the aid of a neighboring tribe, they invite it to eat broth made of the flesh of their enemies.[2] Among the Abnakis, when a body of their warriors enters an enemy's territory, it is generally divided into different parties of thirty or forty; and the chief says to each, to you is given such a hamlet to eat, to you such a village,[3] &c. These expressions remain in the language of some of the tribes, in which the custom of eating their prisoners taken in war no longer exists. Cannibalism, however, undoubtedly prevailed in

[1] Robertson, b. iv. p. 150.
[2] Robertson, b. iv. p. 164.
[3] Lettres Edif. tom. vi. p. 205.

many parts of the new world;[1] and, contrary to the opinion of Dr. Robertson, I cannot but think that it must have had its origin in extreme want, though the custom might afterwards be continued from other motives. It seems to be a worse compliment to human nature, and to the savage state, to attribute this horrid repast to malignant passions, without the goad of necessity, rather than to the great law of self-preservation, which has at times overcome every other feeling even among the most humane and civilized people. When once it had prevailed, though only occasionally, from this cause, the fear that a savage might feel of becoming a repast to his enemies, might easily raise the passion of rancor and revenge to so high a pitch, as to urge him to treat his prisoners in this way, though not prompted at the time by hunger.

The missionaries speak of several nations, which appeared to use human flesh whenever they could obtain it, as they would the flesh of any of the rarer animals.[2] These accounts may perhaps be exaggerated, though they seem to be confirmed in a great degree by the late voyages to

[1] Robertson, b. iv. p. 164.

[2] Lettres Edif. tom. viii. p. 105, 271; tom. vi. p. 266.

among the American Indians.

the northwest coast of America, and by captain Cook's description of the state of society in the southern island of New Zealand.[1] The people of Nootka Sound appear to be cannibals,[2] and the chief of the district Maquinna is said to be so addicted to this horrid banquet, that, in cold blood, he kills a slave every moon to gratify his unnatural appetite.[3]

The predominant principle of self-preservation, connected in the breast of the savage, most intimately, with the safety and power of the community to which he belongs, prevents the admission of any of those ideas of honor and gallantry in war, which prevail among more civilized nations. To fly from an adversary that is on his guard, and to avoid a contest where he cannot contend without risk to his own person, and consequently to his community, is the point of honor with the American. The odds of ten to one are necessary to

[1] Cautious as captain Cook always is, he says of the New Zealanders, "it was but too evident that they have a great liking for this kind of food." Second Voy. vol. i. p. 246. And in the last voyage, speaking of their perpetual hostilities, he says, "and perhaps the desire of a good meal may be no small incitement." Vol. i. p. 137.

[2] Cook's Third Voy. vol. ii. p. 271.

[3] Meares' Voy. chap. xxiii. p. 255.

warrent an attack on a person who is armed prepared to resist, and even then, each is s of being the first to advance.[1] The great o of the most renowned warrior is, by every s cunning and deceit, by every mode of strat and surprise, that his invention can sugges weaken and destroy the tribes of his enemies the least possible loss to his own. To meet a emy on equal terms, is regarded as extreme To fall in battle, instead of being reckoned a norable death, is a misfortune, which subjec memory of a warrior to the imputation of ras and imprudence. But to lie in wait day after till he can rush upon his prey when most s and least able to resist him; to steal in the de night upon his enemies, set fire to their huts massacre the inhabitants, as they fly naked defenceless from the flames,[2] are deeds of g which will be of deathless memory in the h of his grateful countrymen.

This mode of warfare is evidently generat a consciousness of the difficulties attendin

[1] Lettres Edif. tom. vi. p. 360.

[2] Charlevoix, N. Fr. tom. iii. p. 376.

[3] Robertson, b. iv. p. 155. Letters Edif. tom. vi. p 360.

among the American Indians.

rearing of new citizens under the hardships and dangers of savage life. And these powerful causes of destruction may in some instances be so great, as to keep down the population even considerably below the means of subsistence; but the fear that the Americans betray of any diminution of their society, and their apparent wish to increase it, are no proofs that this is generally the case. The country could not probably support the addition that is coveted in each society; but an accession of strength to one tribe, opens to it new sources of subsistence in the comparative weakness of its adversaries; and, on the contrary, a diminution of its numbers, so far from giving greater plenty to the remaining members, subjects them to extirpation or famine from the irruptions of their stronger neighbors.

The Chiriguanes, originally only a small part of the tribe of Guaranis, left their native country in Paraguay, and settled in the mountains towards Peru. They found sufficient subsistence in their new country, increased rapidly, attacked their neighbors, and by superior valor, or superior fortune, gradually exterminated them, and took possession of their lands; occupying a great extent of country, and having increased, in the course of some years, from three or four thousand to thirty

thousand,[1] while the tribes of their weaker neighbors were daily thinned by famine and the sword.

Such instances prove the rapid increase even of the Americans under favorable circumstances, and sufficiently account for the fear which prevails in every tribe of diminishing its numbers, and the frequent wish to increase them,[2] without supposing a superabundance of food in the territory actually possessed.

That the increase of the Americans is regulated more by the means of subsistence, than by any of the other causes that have been mentioned as affecting their population; or rather perhaps, I should say, that these causes themselves are principally regulated by the plenty or scarcity of subsistence, is sufficiently evinced from the greater frequency of the tribes, and the greater numbers in each throughout all those parts of the country, where from the vicinity of lakes or rivers, the superior fertility of the soil, or further advances in improvement, food becomes more abundant. In

[1] Lettres Edif. tom. viii. p. 243. Les Chiriguanes multiplierent prodigieusement, et en assez peu d'annees leur nombre monta a trente mille ames.

[2] Lafitau, tom. ii p. 163.

among the American Indians.

the interior of the provinces bordering on the Oronoco, several hundred miles may be traversed in different directions without finding a single hut, or observing the footsteps of a single creature. In some parts of North America, where the climate is more rigorous, and the soil less fertile, the desolation is still greater. Vast tracts of some hundred leagues have been crossed through uninhabited plains and forests.[1] The missionaries speak of journies of twelve days without meeting with a single soul,[2] and of immense tracts of country, in which scarcely three or four scattered villages were to be found.[3] Some of these deserts did not furnish game,[4] and were therefore entirely desolate; others which were to a certain degree stocked with it, were traversed in the hunting seasons by parties, who encamped and remained in different spots, according to the success they met with, and were therefore really inhabited in proportion to the quantity of subsistence which they yielded.[5]

[1] Robertson, b. iv. p. 129, 130.
[2] Lettres Edif. tom. vi. p. 357.
[3] Lettres Edif. tom. vi. p. 321.
[4] Lettres Edif. tom. ix. p. 145.
[5] Lettres Edif. tom. vi. p. 66, 81, 345; tom. ix. p. 145.

Other districts of America are described as comparatively fully peopled; such as the borders of the great northern lakes, the shores of the Mississippi, Louisiana, and many provinces in South America. The villages here were large, and near each other, in proportion to the superior fruitfulness of the territory in game and fish, and the advances made by the inhabitants in agriculture. The Indians of the great and populous empires of Mexico and Peru sprung undoubtedly from the same stock, and originally possessed the same customs as their ruder brethren; but the moment that, by a fortunate train of circumstances, they were led to improve and extend their agriculture, a considerable population rapidly followed, in spite of the apathy of the men or the destructive habits of the women. These habits would indeed in a great measure yield to the change of circumstances; and the substitution of a more quiet and sedentary life, for a life of perpetual wandering and hardship, would immediately render the women more fruitful, and enable them at the same time to attend to the wants of a larger family.

[1] Lettres Edif. tom. ix. p, 90, 142. Robertson, b. iv. p. 141.

among the American Indians.

In a general view of the American continent, as described by historians, the population seems to have been spread over the surface very nearly in proportion to the quantity of food, which the inhabitants of the different parts, in the actual state of their industry and improvement, could obtain; and that, with few exceptions, it pressed hard against this limit, rather than fell short of it, appears from the frequent recurrence of distress for want of food in all parts of America.

Remarkable instances occur, according to Dr. Robertson, of the calamities which rude nations suffer by famine. As one of them, he mentions an account given by Alvar Nugnez Cabeca de Vaca, one of the Spanish adventurers, who resided almost nine years among the savages of Florida. He describes them as unacquainted with every species of agriculture, and living chiefly upon the roots of different plants, which they procure with great difficulty, wandering from place to place in search of them. Sometimes they kill game, sometimes they catch fish, but in such small quantities, that there hunger is so extreme, as to compel them to eat spiders, the eggs of ants, worms, lizards, serpents, a kind of unctuous earth, and, I am persuaded, he says, that if in this coun-

try there were any stones, they would swallow them. They preserve the bones of fishes and serpents, which they grind into powder and eat. The only season when they do not suffer much from famine is when a certain fruit like the opuntia, or prickly-pear, is ripe; but they are sometimes obliged to travel far from their usual place of residence in order to find it. In another place, he observes, that they are frequently reduced to pass two or three days without food.[1]

Ellis, in his voyage to Hudson's Bay, feelingly describes the sufferings of the Indians in that neighborhood from extreme want. Having mentioned the severity of the climate, he says, "Great "as these hardships are which result from the "rigor of the cold, yet it may justly be affirmed, "that they are much inferior to those which they "feel from the scarcity of provisions, and the dif- "ficulty they are under of procuring them. A "story which is related at the factories, and known "to be true, will sufficiently prove this, and give "the compassionate reader a just idea of the mi- "series to which these unhappy people are ex- "posed." He then gives an account of a poor Indian and his wife, who, on the failure of game,

[1] Robertson, note 28 to p. 117, b. iv.

having eaten up all the skins which they wore as clothing were reduced to the dreadful extremity of supporting themselves on the flesh of two of their children.[1] In another place he says, "It "has sometimes happened, that the Indians who "come in summer to trade at the factories, miss- "ing the succors they expected, have been oblig- "ed to singe off the hair from thousands of beaver "skins in order to feed upon the leather."[2]

The Abbé Raynal, who is continually reasoning most inconsistently in his comparisons on savage and civilized life, though in one place he speaks of the savage as morally sure of a competent subsistence, yet in his account of the nations of Canada says, that though they lived in a country abounding in game and fish, yet in some seasons, and sometimes for whole years, this resource failed them; and famine then occasioned a great destruction among a people who were at too great a distance to assist each other.[3]

Charlevoix, speaking of the inconveniences and distresses to which the missionaries were

[1] Page 196.

[2] Page 194.

[3] Raynal, Hist. des Indes, tom. viii. l. xv. p. 92.

subject, observes, that not unfrequently the evils which he had been describing are effaced by a greater, in comparison of which all the others are nothing. This is famine. It is true, says he, that the savages can bear hunger with as much patience as they show carelessness in providing against it; but they are sometimes reduced to extremities beyond their power to support.[1]

It is the general custom among most of the American nations, even those which have made some progress in agriculture, to disperse themselves in the woods at certain seasons of the year, and to subsist for some months on the produce of the chace, as a principal part of their annual supplies.[2] To remain in their villages exposes them to certain famine;[3] and in the woods they are not always sure to escape it. The most able hunters sometimes fail of success, even where there is no deficiency of game;[4] and in their forests, on the failure of this resource, the hunter or the traveller

[1] Hist. N. Fr. tom. iii. p. 338.

[2] Lettres Edif. tom. vi. p. 66, 81, 345; ix. 145.

[3] Lettres Edif. tom. vi. 82, 196, 197, 215; ix. 151.

[4] Charlevoix, N. Fr. tom. iii. p. 201. Hennepin, Mœurs des Sauv. p. 78.

among the American Indians.

is exposed to the most cruel want.[1] The Indians in their hunting excursions are sometimes reduced to pass three or four days without food;[2] and a missionary relates an account of some Iroquois who, on one of these occasions, having supported themselves as long as they could, by eating the skins which they had with them, their shoes, and the bark of trees, at length, in despair, sacrificed some of the party to support the rest. Out of eleven, five only returned alive.[3]

The Indians in many parts of South America live in extreme want,[4] and are sometimes destroyed by absolute famines.[5] The islands, rich as they appear to be, were peopled fully up to the level of their produce. If a few Spaniards settled in any district, such a small addition of supernumerary mouths soon occasioned a severe dearth of provisions.[6] The flourishing Mexican empire was in the same state in this respect; and Cortez often

[1] Lettres Edif. tom. vi. p. 167, 220.
[2] Id. tom. vi. p. 33.
[3] Id. tom. vi. p. 71.
[4] Lettres Edif. tom. vii. p. 383; ix. 140.
[5] Id. tom. viii. p. 79.
[6] Robertson, b. iv. p. 121. Burke's America, vol. i. p. 30.

found the greatest difficulty in procuring subsistence for his small body of soldiers.[1] Even the Missions of Paraguay, with all the care and foresight of the Jesuits, and notwithstanding that their population was kept down by frequent epidemics, were by no means totally exempt from the pressure of want. The Indians of the Mission of St. Michael are mentioned as having at one time increased so much, that the lands capable of cultivation in their neighborhood produced only half of the grain necessary for their support.[2] Long droughts often destroyed their cattle,[3] and occasioned a failure of their crops; and on these occasions some of the Missions were reduced to the most extreme indigence, and would have perished from famine, but for the assistance of their neighbors.[4]

The late voyages to the northwest coast of America confirm these accounts of the frequent pressure of want in savage life, and show the uncertainty of the resource of fishing, which seems to afford, in general, the most plentiful

[1] Robertson, b. viii. p. 212.
[2] Lettres Edif. tom. ix. p. 381.
[3] Id. tom. ix. p. 191.
[4] Lettres Edif. tom. ix. p. 206, 380.

harvest of food that is furnished by unassisted nature. The sea on the coast near Nootka Sound is seldom or never so much frozen as to prevent the inhabitants from having access to it. Yet from the very great precautions they use in laying up stores for the winter, and their attention to prepare and preserve whatever food is capable of it for the colder seasons, it is evident that the sea at these times yields no fish; and it appears, that they often undergo very great hardships from want of provisions, in the cold months.[1] During a Mr. Mackay's stay at Nootka Sound, from 1786 to 1787, the length and severity of the winter occasioned a famine. The stock of dried fish was expended, and no fresh supplies of any kind were to be caught, so that the natives were obliged to submit to a fixed allowance, and the chiefs brought every day to our countrymen the stated meal of seven dried herrings' heads. Mr. Meares says, that the perusal of this gentleman's journal would shock any mind tinctured with humanity.[2]

Captain Vancouver mentions some of the peo-

[1] Meares' Voy. ch. xxiv. p. 266.
[2] Id. ch. xi. p. 132.

ple to the north of Nootka Sound, as living very miserably on a paste made of the inner bark of the pine tree and cockles.[1] In one of the boat excursions, a party of Indians was met with who had some halibut, but though very high prices were offered, they could not be induced to part with any. This, as captain Vancouver observes, was singular, and indicated a very scanty supply.[2] At Nootka Sound in the year 1794 fish had become very scarce, and bore an exorbitant price; as, either from the badness of the season or from neglect, the inhabitants had experienced the greatest distress for want of provisions during the winter.[3]

Pérouse describes the Indians in the neighborhood of Port François as living during the summer in the greatest abundance by fishing, but exposed in the winter to perish from want.[4] It is not, therefore, as Lord Kaimes imagines, that the American tribes have never increased sufficiently to render the pastoral or agricultural state

[1] Vancouver's Voy. vol. ii. b. ii. c. ii. p. 273.
[2] Id. p. 282.
[3] Id. vol. iii. b. vi. c. i. p. 304.
[4] Voy. de Pérouse, ch. ix. p. 400.

necessary to them;[1] but, from some cause or other, they have not adopted in any great degree these more plentiful modes of procuring subsistence, and therefore cannot have increased so as to become populous. If hunger alone could have prompted the savage tribes of America to such a change in their habits, I do not conceive that there would have been a single nation of hunters and fishers remaining; but it is evident, that some fortunate train of circumstances, in addition to this stimulus, is necessary for the purpose; and it is undoubtedly probable, that these arts of obtaining food will be first invented and improved in those spots that are best suited to them, and where the natural fertility of the situation, by allowing a greater number of people to subsist together, would give the fairest chance to the inventive powers of the human mind.

Among most of the American tribes that we have been considering, so great a degree of equality prevailed, that all the members of each community would be nearly equal sharers in the general hardships of savage life, and in the pressure of

[1] Sketches of the Hist. of Man, vol. i. p. 99, 105, 8vo. 2d. edit.

occasional famines. But in many of the more southern nations, as in Bagota,[1] and among the Natchez,[2] and particularly in Mexico and Peru, where a great distinction of ranks prevailed, and the lower classes were in a state of absolute servitude,[3] it is evident that, on occasion of any failure of subsistence, these would be the principal sufferers, and the positive checks to population would act almost exclusively on this part of the community.

The very extraordinary depopulation that has taken place among the American Indians, may appear to some to contradict the theory which is intended to be established; but it will be found that the causes of this rapid diminution may all be resolved into the three great checks to population that have been stated; and it is not asserted that these checks, operating from particular circumstances with unusual force, may not in some instances be more powerful even than the principle of increase.

---

[1] Robertson, b. iv. p. 141.

[2] Lettres Edif. tom. vii. p. 21. Robertson, b. iv. p. 139.

[3] Robertson, b. vii. p. 190, 242.

among the American Indians.

The insatiable fondness of the Indians for spirituous liquors,[1] which according to Charlevoix is a rage that passes all expression,[2] by producing among them perpetual quarrels and contests, which often terminate fatally, by exposing them to a new train of disorders which their mode of life unfits them to contend with, and by deadening and destroying the generative faculty in its very source, may alone be considered as a vice adequate to produce the present depopulation. In addition to this it should be observed, that almost every where the connexion of the Indians with Europeans has tended to break their spirit, to weaken or to give a wrong direction to their industry, and in consequence to diminish the sources of subsistence. In St. Domingo, the Indians neglected purposely to cultivate their lands in order to starve out their cruel oppressors.[3] In Peru and Chili, the forced industry of the natives was fatally directed to the digging into the bowels of the earth, instead of cultivating its surface; and among the northern nations, the extreme desire to

[1] Major Rogers' Account of North America, p. 210.

[2] Charlevoix, tom. iii. p. 302.

[3] Robertson, b. ii. p. 185. Burke's America, vol. i. p. 300.

purchase European spirits directed the industry of the greatest part of them, almost exclusively, to the procuring of peltry for the purpose of this exchange,[1] which would prevent their attention to the more fruitful sources of subsistence, and at the same time tend rapidly to destroy the produce of the chace. The number of wild animals in all the known parts of America, is probably even more diminished than the number of people.[2] The attention to agriculture has every where slackened rather than increased, as might at first have been expected, from European connexion. In no part of America, either North or South, do we hear of any of the Indian nations living in great plenty, in consequence of their diminished numbers. It may not therefore be very far from the truth, to say, that even now, in spite of all the powerful causes of destruction that have been mentioned, the average population of the American nations is, with few exceptions, on a level with the average quantity of food, which in the present state of their industry they can obtain.

[1] Charlevoix, N. Fr. tom. iii. p. 260.

[2] The general introduction of fire arms among the Indians has probably greatly contributed to the diminution of the wild animals.

CHAPTER V.

Of the Checks to Population in the Islands of the South Sea.

THE Abbé Raynal speaking of the ancient state of the British isles, and of islanders in general, says of them: "It is among these people that "we trace the origin of that multitude of singular "institutions that retard the progress of popula- "tion. Anthropophagi, the castration of males, "the infibulation of females, late marriages, the "consecration of virginity, the approbation of celi- "bacy, the punishments exercised against girls "who become mothers at too early an age,"[1] &c. These customs caused by a superabundance of population in islands have been carried, he says, to the continents, where philosophers of our days are still employed to investigate the reason of them. The Abbé does not seem to be aware, that a savage tribe in America surrounded by enemies, or a civilized and populous nation hemmed in by others in the same state, is in many respects

[1] Raynal, Hist. des Indes, vol. ii. lib. iii. p. 3, 10 vols. 8vo. 1795.

circumstanced like the islander. Though the barriers to a further increase of population be not so well defined, and so open to common observation, on continents as on islands, yet they still present obstacles that are nearly as insurmountable; and the emigrant, impatient of the distresses which he felt in his own country, is by no means secure of finding relief in another. There is probably no island yet known, the produce of which could not be further increased. This is all that can be said of the whole earth. Both are peopled up to their actual produce. And the whole earth is in this respect like an island. But as the bounds to the number of people on islands, particularly when they are of small extent, are so narrow, and so distinctly marked, that every person must see and acknowledge them, an inquiry into the checks to population on those of which we have the most authentic accounts may perhaps tend considerably to illustrate the present subject. The question that is asked in captain Cook's First Voyage, with respect to the thinly scattered savages of New Holland, "By what means the inhabitants of "this country are reduced to such a number as "it can subsist?"[1] May be asked with equal pro-

[1] Cook's First Voyage, vol. iii. p. 240. 4to.

the Islands of the South Sea.

priety respecting the most populous islands in the South Sea, or the best peopled countries in Europe and Asia. The question, applied generally, appears to me to be highly curious, and to lead to the elucidation of some of the most obscure, yet important points, in the history of human society. I cannot so clearly and concisely describe the precise aim of the first part of the present work, as by saying, that it is an endeavor to answer this question so applied.

Of the large islands of New Guinea, New Britain, New Caledonia, and the New Hebrides, little is known with certainty. The state of society in them is probably very similar to that which prevails among many of the savage nations of America. They appear to be inhabited by a number of different tribes who are engaged in frequent hostilites with each other. The chiefs have little authority; and private property being in consequence insecure, provisions have been rarely found on them in abundance.[1] With the large island of New Zealand we are better acquainted; but

[1] See the different accounts of New Guinea and New Britain, in the *Histoire des Navigations aux terres Australes*; and of New Caledonia and the New Hebrides in Cook's Second Voyage, vol. ii. b. iii.

not in a manner to give us a favorable impression of the state of society among its inhabitants. The picture of it drawn by captain Cook in his three different voyages contains some of the darkest shades, that are any where to be met with in the history of human nature. The state of perpetual hostility in which the different tribes of these people live with each other, seems to be even more striking than among the savages of any part of America; and their custom of eating human flesh, and even their relish for that kind of food, are established beyond a possibility of doubt.[2] Captain Cook, who is by no means inclined to exaggerate the vices of savage life, says of the natives in the neighborhood of Queen Charlotte's Sound, "If I "had followed the advice of all our pretended "friends, I might have extirpated the whole race; "for the people of each hamlet or village, by "turns, applied to me to destroy the other. One "would have thought it almost impossible that so "striking a proof of the divided state in which "these miserable people live, could have been as-"signed."[3] And in the same chapter further on,

[1] Cook's First Voyage, vol. ii. p. 345. Second Voyage, vol. i. p. 101. Third Voyage, vol. i. p. 161, &c.

[2] Second Voyage, vol. i. p. 246.

[3] Third Voyage, vol. i. p. 142.

he says, "From my own observations, and the in-
"formation of Taweiharooa, it appears to me, that
"the New Zealanders must live under perpetual
"apprehensions of being destroyed by each other;
"there being few of their tribes that have not, as
"they think, sustained wrongs from some other
"tribes, which they are continually upon the
"watch to revenge. And perhaps the desire of
"a good meal may be no small incitement.****
"Their method of executing their horrible de-
"signs is by stealing upon the adverse party in
"the night; and if they find them unguarded
"(which, however, I believe is very seldom the
"case) they kill every one indiscriminately, not
"even sparing the women and children. When
"the massacre is completed, they either feast and
"gorge themselves on the spot, or carry off as
"many of the dead bodies as they can, and devour
"them at home with acts of brutality too shock-
"ing to be described.****To give quarter, or to
"take prisoners, makes no part of the military
"law, so that the vanquished can only save their
"lives by flight. This perpetual state of war,
"and destructive method of conducting it, ope-
"rates so strongly in producing habitual circum-
"spection, that one hardly ever finds a New Zea-

" lander off his guard, either by night or by day."[1]

As these observations occur in the last voyage, in which, the errors of former accounts would have been corrected, and as a constant state of warfare is here represented as prevailing to such a degree, that it may be considered as the principal check to the population of New Zealand, little need be added on this subject. We are not informed whether any customs are practised by the women unfavorable to population. If such be known, they are probably never resorted to, except in times of great distress; as each tribe will naturally wish to increase the number of its members, in order to give itself greater power of attack and defence. But the vagabond life which the women of the southern island lead, and the constant state of alarm in which they live, being obliged to travel and work with arms in their hands,[2] must undoubtedly be very unfavorable to gestation, and tend greatly to prevent large families.

Yet, powerful as these checks to population are, it appears, from the recurrence of seasons of scarcity, that they seldom repress the number of people below the average means of subsistence.

[1] Cook's Third Voy. vol. i. p. 137.
[2] Id. Second Voy. vol. i. p. 127.

the Islands of the South Sea.

"That such seasons there are" (captain Cook says) "our observations leave us no room to "doubt."[1] Fish is a principal part of their food, which, being only to be procured on the sea coast, and at certain times,[2] must always be considered as a precarious resource. It must be extremely difficult to dry and preserve any considerable stores in a state of society subject to such constant alarms; particularly, as we may suppose, that the bays and creeks most abounding in fish would most frequently be the subject of obstinate contest, to people who were wandering in search of food.[3] The vegetable productions are, the fern root, yams, clams, and potatoes.[4] The three last are raised by cultivation, and are seldom found on the southern island, where agriculture is but little known.[5] On the occasional failure of these scanty resources from unfavorable seasons, it may be imagined that the distress must be dreadful. At such periods it does not seem improbable, that the desire of a good meal should give addi-

[1] Cook's First Voy. vol. iii. p. 66.
[2] Id. p. 45.
[3] Id. Third Voy. vol. i. p. 157.
[4] Id. First Voy. iii. p. 43.
[5] Id. First Voy. vol. ii. p. 405.

tional force to the desire of revenge, and that they should be "perpetually destroying each other by "violence, as the only alternative of perishing "by hunger."[1]

If we turn our eyes from the thinly scattered inhabitants of New Zealand, to the crowded shores of Otaheite and the Society Islands a different scene opens to our view. All apprehension of dearth seems at first sight to be banished from a country that is described to be fruitful as the garden of the Hesperides.[2] But this first impression would be immediately corrected by a moment's reflection. Happiness and plenty have always been considered as the most powerful causes of increase. In a delightful climate where few diseases are known, and the women are condemned to no severe fatigues, why should not these causes operate with a force unparallelled in less favorable regions? Yet if they did, where could the population find room and food in such circumscribed limits? If the numbers in Otaheite, not 40 leagues in circuit, surprised captain Cook, when he calculated them at two hundred

[1] Cook's First Voy. vol. iii. p. 45.

[2] Missionary Voy. Appendix, p. 347.

the Islands of the South Sea.

and four thousand,[1] where could they be disposed of in a single century, when they would amount to above three millions, supposing them to double their numbers every twenty-five years.[2] Each island of the group would be in a similar situation, the removal from one to another would be a change of place, but not a change of the species of distress. Effectual emigration, or effectual importation, would be utterly excluded, from the situation of the islands, and the state of navigation among their inhabitants.

The difficulty here is reduced to so narrow a compass, is so clear, precise, and forcible, that we cannot escape from it. It cannot be answered in the usual vague and inconsiderate manner, by talking of emigration, and further cultivation. In the present instance we cannot but acknow-

[1] Cook's Second Voy. vol. i. p. 349.

[2] I feel very little doubt that this rate of increase is much slower than would really take place, supposing every check to be removed. If Otaheite, with its present produce, were peopled only with a hundred persons, the two sexes in equal numbers, and each man constant to one woman, I cannot but think, that for five or six successive periods, the increase would be more rapid than in any instance hitherto known, and that they would probably double their numbers in less than fifteen years.

ledge, that the one is impossible, and the other glaringly inadequate. The fullest conviction must stare us in the face, that the people on this group of islands could not continue to double their numbers every twenty-five years; and before we proceed to inquire into the state of society on them, we must be perfectly certain, that, unless a perpetual miracle render the women barren, we shall be able to trace some very powerful checks to population in the habits of the people.

The successive accounts that we have received of Otaheite and the neighboring islands, leave us no room to doubt the existence of the Eareeoie societies[1] which have justly occasioned so much surprise among civilized nations. They have been so often described, that little more need be said of them here, than that promiscuous intercourse and infanticide appear to be their fundamental laws. They consist exclusively of the higher classes; "and" (according to Mr. Anderson)[2] "so agreeable is this licentious plan of

[1] Cook's First Voy. vol. ii. p. 207. & seq. Second Voy. vol. i. p. 352. Third Voy. vol. ii. p. 157. & seq. Missionary Voy. Appendix, p. 346. 4to.

[2] Mr. Anderson acted in the capacity of naturalist and surgeon in Cook's last voyage. Captain Cook and all the officers of the expedition seem to have had a very high opinion of his talents and accuracy of obser-

" life to their disposition, that the most beautiful " of both sexes thus commonly spend their youth- " ful days, habituated to the practise of enormi- " ties that would disgrace the most savage tribes. " **** When an Eareeoie woman is delivered " of a child, a piece of cloth dipped in water is " applied to the mouth and nose which suffocates " it."[1] Captain Cook observes, " It is certain, " that these societies greatly prevent the increase " of the superior classes of people of which they " are composed." Of the truth of this observation there can be no doubt.

Though no particular institutions of the same nature have been found among the lower classes; yet the vices which form their most prominent features are but too generally spread. Infanticide is not confined to the Eareeoies. It is permitted to all; and as its prevalence, among the higher classes of the people, has removed from it all odium, or imputation of poverty, it is probably often adopted rather as a fashion than a resort of

---

vation. His accounts therefore may be looked upon as of the first authority.

[1] Cook's Third Voy. vol. ii. p. 158, 159.

[2] Id. Second Voy. vol. i. p. 352.

necessity, and appears to be practised familiarly and without reserve.

It is a very just observation of Hume, that the permission of infanticide generally contributes to increase the population of a country.[1] By removing the fears of too numerous a family, it encourages marriage, and the powerful yearnings of nature prevent parents from resorting to so cruel an expedient, except in extreme cases. The fashion of the Eereeoie societies in Otaheite and its neighboring islands may have made them an exception to this observation, and the custom has probably here a contrary tendency.

The debauchery and promiscuous intercourse which prevail among the lower classes of people, though in some instances they may have been exaggerated, are established to a great extent on unquestionable authority. Captain Cook, in a professed endeavor to rescue the women of Otaheite from a too general imputation of licentiousness, acknowledges that there are more of this character here than in other countries, making at the same time a remark of a most decisive nature, by observing, that the women who thus conduct

[1] Hume's Essays, vol. i. essay xi. p. 431, 8vo. 1764.

themselves do not in any respect lower their rank in society, but mix indiscriminately with those of the most virtuous character.[1]

The common marriages in Otaheite are without any other ceremony than a present from the man to the parents of the girl. And this seems to be rather a bargain with them for permission to try their daughter, than an absolute contract for a wife. If the father should think that he has not been sufficiently paid for his daughter, he makes no scruple of forcing her to leave her friend, and to cohabit with another person who may be more liberal. The man is always at liberty to make a new choice. Should his consort become pregnant, he may kill the child and after that continue his connexion with the mother, or leave her, according to his pleasure. It is only when he has adopted a child, and suffered it to live, that the parties are considered as in the marriage state. A younger wife, however, may afterwards be joined to the first; but the changing of connexions is much more general than this plan, and is a thing so common, that they speak of it with great indifference.[2] Libertinism be-

[1] Cook's Second Voy. vol. i. p. 187.

[2] Cook's Third Voy. vol. ii. p. 157.

Of the checks to population in

fore marriage seems to be no objection to a union of this kind ultimately.

The checks to population from such a state of society would alone appear sufficient to counteract the effects of the most delightful climate and the most exuberant plenty. Yet these are not all. The wars between the inhabitants of the different islands, and their civil contentions among themselves, are frequent, and sometimes carried on in a very destructive manner.[1] Besides the waste of human life in the field of battle, the conquerors generally ravage the enemy's territory, kill, or carry off the hogs and poultry, and reduce as much as possible the means of future subsistence. The island of Otaheite, which in the years 1767 and 1768 swarmed with hogs and fowls, was in 1773 so ill supplied with these animals, that hardly any thing could induce the owners to part with them. This was attributed by captain Cook principally to the wars which had taken place during that interval.[2] On captain Vancouver's visit to Otaheite in 1791, he found that most of his friends that he had left in 1777 were

[1] Bougainville, Voy. autour du Monde, ch. iii. p. 217. Cook's First Voy. vol. ii. p. 244. Missionary Voy. p. 224.

[2] Cook's Second Voy. vol. i. p. 182, 183.

dead; that there had been many wars since that time, in some of which the chiefs of the western districts of Otaheite had joined the enemy; and that the king had been for a considerable time completely worsted, and his own districts entirely laid waste. Most of the animals, plants, and herbs, which captain Cook had left, had been destroyed by the ravages of war.[1]

The human sacrifices which are frequent in Otaheite, though alone sufficient strongly to fix the stain of barbarism on the character of the natives, do not probably occur in such considerable numbers as materially to affect the population of the country; and the diseases, though they have been dreadfully increased by European contact, were before peculiarly lenient; and even for some time afterwards were not marked by any extraordinary fatality.[2]

The great checks to increase appear to be the vices of promiscuous intercourse, infanticide, and war, each of these operating with very considerable force. Yet powerful in the prevention and destruction of life as these causes must be, they have not always kept down the population to the

[1] Vancouver's Voy. vol. i. b. i. ch. vi. p. 98, 4to.

[2] Cook's Third Voy. vol. ii. p. 148.

level of the means of subsistence. According to Mr. Anderson, "Notwithstanding the extreme "fertility of the island, a famine frequently hap- "pens in which it is said many perish. Whe- "ther this be owing to the failure of some sea- "sons, to overpopulation, which must sometimes "almost necessarily happen, or wars, I have not "been able to determine; though the truth of the "fact may fairly be inferred from the great econo- "my that they observe with respect to their food, "even when there is plenty."[1] After a dinner with a chief at Ulietea, captain Cook observed, that when the company rose, many of the common people rushed in, to pick up the crumbs which had fallen, and for which they searched the leaves very narrowly. Several of them daily attended the ships, and assisted the butchers for the sake of the entrails of the hogs which were killed. In general little seemed to fall to their share except offals. "It must, however, be owned," captain Cook says, "that they are exceedingly careful "of every kind of provision, and waste nothing "that can be eaten by man, flesh and fish espe- "cially."[2]

From Mr. Anderson's account, it appears that

[1] Cook's Third Voy. vol. ii. p. 153, 154.

[2] Id. Second Voy. vol. i. p. 176.

a very small portion of animal food falls to the lot of the lower class of people, and then it is either fish, sea-eggs, or other marine productions; for they seldom or never eat pork. The king or principal chief is alone able to furnish this luxury every day; and the inferior chiefs, according to their riches, once a week, fortnight, or month.[1] When the hogs and fowls have been diminished by wars, or too great consumption, a prohibition is laid upon these articles of food, which continues in force sometimes for several months, or even for a year or two, during which time, of course, they multiply very fast, and become again plentiful.[2] The common diet even of the Eareeoies, who are among the principal people of the islands, is, according to Mr. Anderson, made up of at least nine tenths of vegetable food.[3] And as a distinction of ranks is so strongly marked, and the lives and property of the lower classes of people appear to depend absolutely on the will of their chiefs, we may well imagine that these chiefs will often live in plenty while their vassals and servants are pinched with want.

[1] Cook's Third Voy. vol. ii. p. 154.
[2] Id. p. 155.
[3] Id. p. 148.

Of the checks to population in

From the late accounts of Otaheite, in the Missionary Voyage, it would appear, that the depopulating causes above enumerated have operated with most extraordinary force since captain Cook's last visit. A rapid succession of destructive wars, during a part of that interval, is taken notice of in the intermediate visit of captain Vancouver;[1] and from the small proportion of women remarked by the Missionaries,[2] we may infer that a greater number of female infants had been destroyed than formerly. This scarcity of women would naturally increase the vice of promiscuous intercourse, and, aided by the ravages of European diseases, strike most effectually at the root of population.[3]

It is probable that captain Cook, from the data on which he founded his calculation, may have overrated the population of Otaheite, and perhaps the Missionaries have rated it too low;[4] but I have no doubt that the population has very considerably decreased since captain Cook's visit, from the different accounts that are given of the habits

[1] Vancouver's Voy. vol. i. b. i. c. 7. p. 137.
[2] Missionary Voyage, p. 192, & 385.
[3] Id. Appen. p. 347.
[4] Id. ch. xiii. p. 212.

of the people with regard to economy at the different periods. Captain Cook and Mr. Anderson agree in describing their extreme carefulness of every kind of food; and Mr. Anderson, apparently after a very attentive investigation of the subject, mentions the frequent recurrence of famines. The Missionaries on the contrary, though they strongly noticed the distress from this cause in the Friendly Islands and the Marquesas, speak of the productions of Otaheite as being in the greatest profusion; and observe, that notwithstanding the horrible waste committed at feastings, and by the Eareeoie society, want is seldom known.[1]

It would appear from these accounts, that the population of Otaheite is at present repressed considerably below the average means of subsistence, but it would be premature to conclude that it will continue long so. The variations in the state of the island, which were observed by captain Cook, in his different visits, appear to prove that there are marked oscillations in its prosperity and population.[2] And this is exactly what we should suppose from theory. We cannot imagine that

[1] Missionary Voy. p. 195. Appen. p. 385.

[2] Cook's Second Voy. vol. i. p. 182. & seq. & 346.

the population of any of these islands has, for ages past, remained stationary at a fixed number, or that it can have been regularly increasing, according to any rate, however slow. Great fluctuations must necessarily have taken place. Overpopulousness would at all times increase the natural propensity of savages to war; and the enmities occasioned by aggressions of this kind, would continue to spread devastation, long after the original inconvenience, which might have prompted them, had ceased to be felt.[1] The distresses experienced from one or two unfavorable seasons, operating on a crowded population, which was before living with the greatest economy, and pressing hard against the limits of its food, would, in such a state of society, occasion the more general prevalence of infanticide and promiscuous intercourse;[2] and these depopulating causes would in the same manner continue to act with increas-

[1] Missionary Voy. p. 225.

[2] I hope I may never be misunderstood with regard to some of these preventive causes of overpopulation, and be supposed to imply the slightest approbation of them, merely because I relate their effects. A cause which may prevent any particular evil may be beyond all comparison worse than the evil itself.

ed force, for some time after the occasion which had aggravated them was at an end. A change of habits to a certain degree, gradually produced by a change of circumstances, would soon restore the population, which could not long be kept below its natural level without the most extreme violence. How far European contact may operate in Otaheite with this extreme violence, and prevent it from recovering its former population, is a point which experience only can determine. But should this be the case, I have no doubt that on tracing the causes of it, we should find them to be aggravated vice and misery.

Of the other islands in the Pacific Ocean we have a less intimate knowledge than of Otaheite; but our information is sufficient to assure us, that the state of society in all the principal groups of these islands is in most respects extremely similar. Among the Friendly and Sandwich islanders, the same feudal system and feudal turbulence, the same extraordinary power of the chiefs and degraded state of the lower orders of society, and nearly the same promiscuous intercourse among a great part of the people, have been found to prevail, as at Otaheite.

In the Friendly Islands, though the power of

the king was said to be unlimited, and the life and property of the subject at his disposal; yet it appeared, that some of the other chiefs acted like petty sovereigns, and frequently thwarted his measures, of which he often complained. "But however independent" (captain Cook says) "on the despotic power of the king the great "men may be, we saw instances enough to prove, "that the lower orders of people have no pro- "perty nor safety for their persons, but at the will "of the chiefs, to whom they respectively be- "long."[1] The chiefs often beat the inferior people most unmercifully, and when any of them were caught in a theft on board the ships, their masters far from interceding for them, would often advise the killing of them,[2] which, as the chiefs themselves appeared to have no great horror of the crime of theft, could only arise from their considering the lives of these poor people as absolutely of no value.

Captain Cook, in his first visit to the Sandwich Islands, had reason to think that external

[1] Cook's Third Voy. vol. i. p. 406.
[2] Page 232.
[3] Page 233.

wars and internal commotions were extremely frequent among the natives.[1] And captain Vancouver, in his later account, strongly notices the dreadful devastations in many of the islands from these causes. Incessant contentions had occasioned alterations in the different governments since captain Cook's visit. Only one chief of all that were known at that time was living; and on inquiry, it appeared that few had died a natural death, most of them having been killed in these unhappy contests.[2] The power of the chiefs over the inferior classes of the people in the Sandwich Islands appears to be absolute. The people, on the other hand, pay them the most implicit obedience; and this state of servility has manifestly a great effect in debasing both their minds and bodies.[3] The gradations of rank seem to be even more strongly marked here than in the other islands, as the chiefs of higher rank behave to those who are lower in this scale in the most haughty and oppressive manner.[4]

---

[1] Cook's Third Voy. vol. ii. p. 247.
[2] Vancouver, vol i. b. ii. c. ii. p. 187, 188.
[3] Cook's Third Voyage, vol. iii. p. 157.
[4] Ibid.

Of the checks to population in

It is not known that either in the Friendly or Sandwich Islands infanticide is practised, or that institutions are established similar to the Eareeoie societies in Otaheite; but it seems to be stated on unquestionable authority, that prostitution is extensively diffused, and prevails to a great degree among the lower classes of women,[1] which must always operate as a most powerful check to population. It seems highly probable, that the toutous, or servants, who spend the greatest part of their time in attendance upon the chiefs,[2] do not often marry; and it is evident that the polygamy allowed to the superior people must tend greatly to encourage and aggravate the vice of promiscuous intercourse among the inferior classes.

Were it an established fact, that in the more fertile islands of the Pacific Ocean very little or nothing was suffered from poverty and want of food; as we could not expect to find among savages in such climates any great degree of virtuous restraint, the theory on the subject would naturally lead us to conclude, that vice, including war, was the principal check to their population. The

[1] Cook's Third Voy. vol. i. p. 401. Vol. ii. p. 543. Vol. iii. p. 130. Missionary Voy. p. 270.

[2] Cook's Third Voy. vol. i. p. 394.

the Islands of the South Sea.

accounts which we have of these islands strongly confirm this conclusion. In the three great groups of islands which have been noticed, vice appears to be a most prominent feature. In Easter Island, from the great disproportion of the males to the females,[1] it can scarcely be doubted that infanticide prevails, though the fact may not have come to the knowledge of any of our navigators. Pérouse seemed to think that the women in each district were common property to the men of that district,[2] though the numbers of children which he saw[3] would rather tend to contradict this opinion. The fluctuations in the population of Easter Island appear to have been very considerable since its first discovery by Roggewein in 1722, though it cannot have been much affected by European intercourse. From the description of Pérouse it appeared, at the time of his visit, to be recovering its population, which had been in a

[1] Cook's Second Voy. vol. i. p. 289. Voyage de Pérouse, c. iv. p. 323. c. v. p. 336. 4to. 1794.

[2] Pérouse, c. iv. p. 326. c. v. p. 336.

[3] Pérouse, c. v. p. 336.

very low state, probably either from drought, civil dissensions, or the prevalence in an extreme degree of infanticide and promiscuous intercourse. When captain Cook visited it in his Second Voyage, he calculated the population at six or seven hundred,[1] Pérouse at two thousand, [2] and, from the number of children which he observed, and the number of new houses that were building, he conceived that the population was on the increase.[3]

In the Marianne Islands, according to Pere Gobien, a very great number[4] of the young men remained unmarried, lived like the members of the Eareeoie society in Otaheite, and were distinguished by a similar name.[5] In the island of Fomosa, it is said that the women were not allowed to bring children into the world before the age of thirty-five. If they were with child prior to that period, an abortion was effected by the priestess, and till the husband was forty years of age, the

[1] Cook's Second Voy. vol. i. p. 289.

Pérouse, c. v. p. 336.

[3] Ibid.

[4] Une infinité de jeunes gens. Hist. des Navigations aux terres Australes. vol. ii. p. 507.

[5] Cook's Third Voyage, vol. ii. p. 158. Note of the Editor.

the Islands of the South Sea.

wife continued to live in her father's house, and was only seen by stealth.[1]

The transient visits that have been made to some other islands, and the imperfect accounts that we have of them, do not enable us to enter into any particular detail of their customs; but from the general similarity of these customs, as far as has been observed, we have reason to think that though they may not be marked by some of

[1] Harris's Collection of Voyages, 2 vols. folio. edit. 1744. vol. i. p. 794. This relation is given by John Albert de Mandesloe, a German traveller of some reputation for fidelity, though I believe, in this instance, he takes his account from the Dutch writers quoted by Montesquieu, (Esprit des Loix, liv. 23. ch. 17.) The authority is not perhaps sufficient to establish the existence of so strange a custom, though I confess that it does not appear to me wholly improbable. In the same account it is mentioned, that there is no difference of condition among these people, and that their wars are so bloodless, that the death of a single person generally decides them. In a very healthy climate, where the habits of the people were favorable to population, and a community of goods was established, as no individual would have reason to fear *particular poverty* from a large family, the government would be in a manner compelled to take upon itself the suppression of the population by law; and as this would be the greatest violation of every natural feeling, there cannot be a more forcible argument against a community of goods.

the more attrocious peculiarities which have been mentioned, vicious habits with respect to women, and wars, are the principal checks to their population.

These however are not all. On the subject of the happy state of plenty in which the natives of the South Sea Islands have been said to live, I am inclined to think that our imaginations have been carried beyond the truth, by the exuberant descriptions which have sometimes been given of these delightful spots. The not unfrequent pressure of want, even in Otaheite, mentioned in captain Cook's last voyage, has undeceived us with regard to the most fertile of all these islands; and from the Missionary Voyage it appears, that at certain times of the year, when the bread fruit is out of season, all suffer a temporary scarcity. At Oheitahoo, one of the Marquesas, it amounted to hunger, and the very animals were pinched for want of food. At Tongataboo, the principal of the Friendly Islands, the chiefs to secure plenty changed their abodes to other islands,[1] and at times many of the natives suffered much from want.[2] In the Sandwich Islands long droughts

[1] Missionary Voy. Appen. p. 385.
[2] Id. p. 270.

sometimes occur,[1] hogs and yams are often very scarce,[2] and visitors are received with an unwelcome austerity very different from the profuse benevolence of Otaheite. In New Caledonia the inhabitants feed upon spiders,[3] and are sometimes reduced to eat great pieces of steatite to appease the cravings of their hunger.[4]

These facts strongly prove, that in whatever abundance the productions of these islands may be found at certain periods, or however they may be checked by ignorance, wars, and other causes, the average population, generally speaking, presses hard against the limits of the average food. In a state of society, where the lives of the inferior orders of the people seem to be considered by their superiors as absolutely of no value, it is evident that we are very liable to be deceived with regard to the appearances of abundance; and we may easily conceive that hogs and vegetables might be exchanged in great profusion for European commodities by the principal proprietors,

[1] Vancouver's Voy. vol. ii. b. iii. c. viii. p. 230.

[2] Id. c. vii. and viii.

[3] Voyage in search of Pérouse, chap. xiii. p. 420. Eng. transl. 4to.

[4] Id. chap. xiii. p. 400.

while their vassals and slaves were suffering severely from want.

I cannot conclude this general review of that department of human society, which has been classed under the name of savage life, without observing, that the only advantage in it above civilized life that I can discover, is the possession of a greater degree of leisure by the mass of the people. There is less work to be done, and consequently there is less labor. When we consider the incessant toil to which the lower classes of society in civilized life are condemned, this cannot but appear to us a striking advantage; but it is probably overbalanced by greater disadvantages. In all those countries where provisions are procured with facility, a most tyrannical distinction of rank prevails. Blows and violations of property seem to be matters of course; and the lower classes of the people are in a state of comparative degradation much below what is known in civilized nations.

In that part of savage life where a great degree of equality obtains, the difficulty of procuring food, and the hardships of incessant war, create a degree of labor not inferior to that which is exerted by the lower classes of the people in civiliz-

the Islands of the South Sea.

ed society, though much more unequally divided. But though we may compare the labor of these two classes of human society, their privations and sufferings will admit of no comparison. Nothing appears to me to place this in so striking a point of view, as the whole tenor of education among the ruder tribes of savages in America. Every thing that can contribute to teach the most unmoved patience under the severest pains and misfortunes, every thing that tends to harden the heart, and narrow all the sources of sympathy, is most sedulously inculcated on the savage. The civilized man, on the contrary, though he may be advised to bear evil with patience when it comes, is not instructed to be always expecting it. Other virtues are to be called into action besides fortitude. He is taught to feel for his neighbor, or even his enemy in distress; to encourage and expand his social affections; and in general, to enlarge the sphere of pleasurable emotions. The obvious inference from these two different modes of education is, that the civilized man hopes to enjoy, the savage expects only to suffer.

The prosperous system of Spartan discipline, and that unnatural absorption of every private feeling in concern for the public, which has some-

times been so absurdly admired, could never have existed but among a people exposed to perpetual hardships and privations from incessant war, and in a state under the constant fear of dreadful reverses of fortune. Instead of considering these phenomena as indicating any peculiar tendency to fortitude and patriotism in the disposition of the Spartans, I should merely consider them as a strong indication of the miserable and almost savage state of Sparta, and of Greece in general at that time. Like the commodities in a market, those virtues will be produced in the greatest quantity for which there is the greatest demand; and where patience under pain and privation, and extravagant patriotic sacrifices, are the most called for, it is a melancholy indication of the misery of the people, and the insecurity of the state.

CHAPTER VI.

Of the Checks to Population among the ancient Inhabitants of the North of Europe.

A HISTORY of the early migrations and settlements of mankind, with the motives which prompted them, would illustrate in a striking manner the constant tendency in the human race to increase beyond the means of subsistence. Without some general law of this nature, it would seem as if the world could never have been peopled. A state of sloth, and not of restlessness and activity, seems evidently to be the natural state of man; and this latter disposition could not have been generated but by the strong goad of necessity, though it might afterwards be continued by habit, and the new associations that were formed from it, the spirit of enterprise, and the thirst of martial glory.

We are told that Abram and Lot had so great substance in cattle, that the land would not bear them both, that they might dwell together. There was strife between their herdsmen. And Abram proposed to Lot to separate, and said, " Is

" not the whole land before thee? If thou wilt
" take the left hand, then I will go to the right;
" if thou depart to the right hand, then I will go
" to the the left."[1]

This simple observation and proposal is a striking illustration of that great spring of action which overspread the whole earth with people, and in the progress of time drove some of the less fortunate inhabitants of the globe, yielding to irresistible pressure, to seek a scanty subsistence in the burning deserts of Asia and Africa, and the frozen regions of Siberia and North America. The first migrations would naturally find no other obstacles than the nature of the country; but when a considerble part of the earth had been peopled, though but thinly, the possessors of these districts would not yield them to others without a struggle; and the redundant inhabitants of any of the more central spots could not find room for themselves without expelling their nearest neighbors, or at least passing through their territories, which would necessarily give occasion to frequent contests.

The middle latitudes of Europe and Asia seem

[1] Genesis, ch. xiii.

ancient inhabitants of the North of Europe.

to have been occupied at an early period of history by nations of shepherds. Thucydides gave it as his opinion, that the civilized states of Europe and Asia, in his time, could not resist the Scythians united. Yet a country in pasture cannot possibly support so many inhabitants as a country in tillage; but what renders nations of shepherds so formidable is the power which they possess of moving altogether, and the necessity they frequently feel of exerting this power in search of fresh pasture for their herds. A tribe that is rich in cattle has an immediate plenty of food. Even the parent stock may be devoured in case of absolute necessity. The women live in greater ease than among nations of hunters, and are consequently more prolific. The men, bold in their united strength, and confiding in their power of procuring pasture for their cattle by change of place, feel probably but few fears about providing for a family. These combined causes soon produce their natural and invariable effect, an extended population. A more frequent and rapid change of place then becomes necessary. A wider and more extensive territory is successively occupied. A broader desolation extends all around them. Want pinches the less fortunate members of the society;

and at length the impossibility of supporting such a number together becomes too evident to be resisted. Young scions are then pushed out from the parent stock, and instructed to explore fresh regions, and to gain happier seats for themselves by their swords.

"The world is all before them where to choose."

Restless from present distress, flushed with the hope of fairer prospects, and animated with the spirit of hardy enterprize, these daring adventurers are likely to become formidable adversaries to all who oppose them. The inhabitants of countries long settled, engaged in the peaceful occupations of trade and agriculture, would not often be able to resist the energy of men acting under such powerful motives of exertion. And the frequent contests with tribes in the same circumstances with themselves would be so many struggles for existence, and would be fought with a desperate courage, inspired by the reflection, that death would be the punishment of defeat, and life the prize of victory.

In these savage contests, many tribes must have been utterly exterminated. Many probably perish by hardships and famine. Others whose leading star had given them a happier direction,

ancient inhabitants of the North of Europe.

became great and powerful tribes, and in their turn sent off fresh adventurers in search of other seats. These would at first owe allegiance to their parent tribe; but in a short time the ties that bound them would be little felt, and they would remain friends, or become enemies, according as their power, their ambition, or their convenience, might dictate.

The prodigious waste of human life occasioned by this perpetual struggle for room and food would be more than supplied by the mighty power of population, acting in some degree unshackled from the constant habit of migration. A prevailing hope of bettering their condition by change of place, a constant expectation of plunder, a power, even if distressed, of selling their children as slaves, added to the natural carelessness of the Barbaric character, would all conspire to raise a population which would remain to be repressed afterwards by famine or war.

The tribes that possessed themselves of the more fruitful regions, though they might win them and maintain them by continual battles, rapidly increased in number and power, from the increased means of subsistence; till at length the whole territory, from the confines of China to the shores of the Baltic, was peopled by a various

race of barbarians, brave, robust, and enterprising, inured to hardships, and delighting in war.[1] While the different fixed governments of Europe and Asia, by superior population and superior skill, were able to oppose an impenetrable barrier to their destroying hordes, they wasted their superfluous numbers in contests with each other; but the moment that the weakness of the settled governments, or the casual union of many of these wandering tribes, gave them the ascendant in power, the storm discharged itself on the fairest provinces of the earth; and China, Persia, Egypt, and Italy, were overwhelmed at different periods in this flood of barbarism. These remarks are strongly exemplified in the fall of the Roman empire. The shepherds of the north of Europe were long held in check by the vigor of the Roman arms, and the terror of the Roman name. The formidable irruption of the Cimbri in search

[1] The various branchings, divisions, and contests of the great Tartar nation are curiously described in the genealogical history of the Tartars by the Khan Abul Ghazi; (translated into English from the French, with additions, in 2 vols. 8vo.) but the misfortune of all history is, that while the motives of a few princes and leaders, in their various projects of ambition, are sometimes detailed with accuracy, the motives which often crowd their standards with willing followers are totally overlooked.

ancient inhabitants of the North of Europe.

of new settlements, though signalized by the destruction of five consular armies, was at length arrested in its victorious career by Marius; and the barbarians were taught to repent their rashness by the almost complete extermination of this powerful colony.[1] The names of Julius Cæsar, of Drusus, Tiberius, and Germanicus, impressed on their minds by the slaughter of their countrymen, continued to inspire them with a fear of encroaching on the Roman territory. But they were rather triumphed over, than vanquished;[2] and though the armies or colonies which they sent forth were either cut off or forced back into their original seats, the vigor of the great German nation remained unimpaired, and ready to pour forth her hardy sons in constant succession, wherever they could force an opening for themselves by their swords. The feeble reigns of Decius, Gallus, Æmilianus, Valerian, and Gallienus, afforded such an opening, and were in consequence marked by a general irruption of barbarians. The Goths, who were supposed to have migrated in the course of some years from Scandinavia to the Euxine, were bribed to with-

[1] Tacitus de Moribus Germanorum, s. 37.
[2] Id.

draw their victorious troops by an annual tribute. But no sooner was the dangerous secret of the wealth and weakness of the Roman empire thus revealed to the world, than new swarms of barbarians spread devastation through the frontier provinces, and terror as far as the gates of Rome.[1] The Franks, the Allemanni, the Goths, and adventurers of less considerable tribes, comprehended under these general appellations, poured like a torrent on different parts of the empire. Rapine and oppression destroyed the produce of the present and the hope of future harvests. A long and general famine was followed by a wasting plague, which for fifteen years ravaged every city and province of the Roman empire; and, judging from the mortality in some spots, it was conjectured, that in a few years, war, pestilence, and famine, had consumed the moiety of the human species.[2] Yet the tide of emigration still continued at intervals to roll impetuously from the north, and the succession of martial princes, who repaired the misfortunes of their predecessors, and propped the falling fate of the empire, had to ac-

[1] Gibbon's Decline and Fall of the Roman Empire, vol. i. c. x. p. 407. et seq. 8vo. edit. 1783.

[2] Id. vol. i. c. x. p. 455, 456.

complish the labors of Hercules in freeing the Roman territory from these barbarous invaders. The Goths, who, in the year 250 and the following years, ravaged the empire both by sea and land with various success, but in the end with the almost total loss of their adventurous bands,[1] in the year 269 sent out an emigration of immense numbers with their wives and families for the purposes of settlement.[2] This formidable body, which was said to consist at first of 320,000 barbarians,[3] was ultimately destroyed and dispersed by the vigor and wisdom of the emperor Claudius. His successor, Aurelian, encountered and vanquished new hosts of the same name that had quitted their settlements in the Ukraine; but one of the implied conditions of the peace was, that he should withdraw the Roman forces from Dacia, and relinquish this great province to the Goths and Vandals.[4] A new and most formidable invasion of the Allemanni threatened soon after to sack the mistress of the world, and three great and bloody battles were fought by Aurelian before

[1] Gibbon, vol. i. c. x. p. 431.
[2] Id. vol. ii. c. xi. p. 13.
[3] Id. p. 11.
[4] Id. p. 19. A. D. 270.

this destroying host could be exterminated, and Italy be delivered from its ravages.[1]

The strength of Aurelian had crushed on every side the enemies of Rome. After his death they seemed to revive with an increase of fury and numbers. They were again vanquished on all sides by the active vigor of Probus. The deliverance of Gaul alone from German invaders is reported to have cost the lives of four hundred thousand barbarians.[2] The victorious emperor pursued his successes into Germany itself, and the princes of the country, astonished at his presence, and dismayed and exhausted by the ill success of their last emigration, submitted to any terms that the conquerors might impose.[3] Probus, and afterwards Diocletian,[4] adopted the plan of recruiting the exhausted provinces of the empire by granting lands to the fugitive or captive barbarians, and disposing of their superfluous numbers where they might be the least likely to be dangerous to the state; but such colonizations were an insufficient vent for the population of the

[1] Gibbon, vol. ii. c. xi. p. 26.
[2] Gibbon, vol. ii. c. xii. p. 75.
[3] Id. p. 79. A. D. 277.
[4] Id. c. xiii. p. 132. A. D. 296.

ancient inhabitants of the North of Europe.

north, and the ardent temper of the barbarians would not always bend to the slow labors of agriculture.[1] During the vigorous reign of Diocletian, unable to make an effectual impression on the Roman frontiers, the Goths, the Vandals, the Gepidæ, the Burgundians, and the Allemanni, wasted each other's strength by mutual hostilities, while the subjects of the empire enjoyed the bloody spectacle, conscious, that whoever vanquished, they vanquished the enemies of Rome.[2]

Under the reign of Constantine the Goths were again formidable. Their strength had been restored by a long peace, and a new generation had arisen, which no longer remembered the misfortunes of ancient days.[3] In two successive wars great numbers of them were slain. Vanquished on every side, they were driven into the mountains; and, in the course of a severe campaign, above a hundred thousand were computed to have perished by cold and hunger.[4] Constantine adopted the plan of Probus and his successors, in granting lands to those suppliant barbarians who

[1] Gibbon, vol. ii. c. xii p. 84.
[2] Gibbon, vol. ii. c. xiii. p. 130.
[3] Id. c. xiv. p. 254. A. D. 322.
[4] Id. vol. iii. c. xviii. p. 125. A. D. 332.

were expelled from their own country. Towards the end of his reign, a competent portion in the provinces of Pannonia, Thrace, Macedonia, and Italy, was assigned for the habitation and subsistence of three hundred thousand Sarmatians.[1]

The warlike Julian had to encounter and vanquish new swarms of Franks and Allemanni, that, emigrating from their German forests during the civil wars of Constantine, settled in different parts of Gaul, and made the scene of their devastations three times more extensive than that of their conquests.[2] Destroyed and repulsed on every side, they were pursued in five expeditions into their own country;[3] but Julian had conquered, as soon as he had penetrated into Germany; and in the midst of that mighty hive which had sent out such swarms of people as to keep the Roman world in perpetual dread, the principal obstacles to his progress were almost impassable roads, and vast unpeopled forests.[4]

Though thus subdued and prostrated by the

[1] Gibbon, vol. iii. c. xviii. p. 127.

[2] Gibbon, vol. iii. c. xix. p. 215. A. D. 356.

[3] Id. p. 228, and vol. iv. c. xxii. p. 17; from A. D. 357 to 359.

[4] Id. vol. iv. c. xxii. p. 17, and vol. iii. c. xix. p. 229.

ancient inhabitants of the North of Europe.

victorious arms of Julian, this hydra-headed monster rose again after a few years; and the firmness, vigilance, and powerful genius of Valentinian were fully called into action, in protecting his dominions from the different irruptions of the Allemanni, the Burgundians, the Saxons, the Goths, the Quadi, and the Sarmatians.[1]

The fate of Rome was at length determined by an irresistible emigration of the Huns from the east and north, which precipitated on the empire the whole body of the Goths;[2] and the continuance of this powerful pressure on the nations of Germany seemed to prompt them to the resolution of abandoning to the fugitives of Sarmatia their woods and morasses, or at least of discharging their superfluous numbers on the provinces of the Roman empire.[3] An emigration of four hundred thousand persons issued from the same coast of the Baltic, which had poured forth the myriads of Cimbri and Teutones during the vigor of the Republic.[4] When this host was destroyed by war and famine, other adventurers succeeded.

---

[1] Gibbon, vol. iv. c. xxv. from A. D. 364 to 375

[2] Gibbon, vol. iv. c. xxvi. p. 382, et. seq. A. D. 376.

[3] Id. vol. v. c. xxx. p, 213.

[4] Id. p. 214. A. D. 406.

The Suevi, the Vandals, the Alani, the Burgundians, passed the Rhine never more to retreat.[1] The conquerors who first settled were expelled or exterminated by new invaders. Clouds of barbarians seemed to collect from all parts of the northern hemisphere. Gathering fresh darkness and terror as they rolled on, the congregated bodies at length obscured the sun of Italy, and sunk the western world in night.

In two centuries from the flight of the Goths across the Danube, barbarians of various names and lineage had plundered and taken possession of Thrace, Pannonia, Gaul, Britain, Spain, Africa, and Italy.[2] The most horrible devastations, and an incredible destruction of the human species, accompanied these rapid conquests; and famine and pestilence, which always march in the train of war, when it ravages with such inconsiderate cruelty, raged in every part of Europe. The historians of the times, who beheld these scenes of desolation, labor and are at a loss for expressions to describe them; but beyond the power of language, the numbers and the destructive violence of these bar-

[1] Gibbon, vol. v. c. xxx. p. 224.

[2] Robertson's Charles V. vol. i. sect. i. p. 7. 8vo. 1782.

ancient inhabitants of the North of Europe.

barous invaders were evinced by the total change which took place in the state of Europe.[1] These tremendous effects, so long and so deeply felt throughout the fairest portions of the earth, may be traced to the simple cause of the superiority of the power of population to the means of subsistence.

Machiavel, in the beginning of his history of Florence, says, "The people who inhabit the "northern parts that lie between the Rhine and "the Danube, living in a healthful and prolific cli- "mate, often increase to such a degree, that vast "numbers of them are forced to leave their native "country, and go in search of new habitations. "When any of those provinces begins to grow too "populous, and wants to disburthen itself, the fol- "lowing method is observed. In the first place, it "is divided into three parts, in each of which there "is an equal portion of the nobility and common- "alty, the rich and the poor. After this they "cast lots, and that division on which the lot falls, "quits the country and goes to seek its fortune, "leaving the other two more room and liberty to "enjoy their possessions at home. These emi- "grations proved the destruction of the Roman

[1] Robertson's Charles V. vol. i. sect. 4. p. 10, 11, 12.

"empire."[1] Gibbon is of opinion that Machiavel has represented these emigrations too much as regular and concerted measures;[2] but I think it highly probable that he has not erred much in this respect, and that it was a foresight of the frequent necessity of thus discharging their

[1] Istorie Fiorentine Machiavelli, l. i. p. 1, 2.

[2] Gibbon, vol. i. c. ix. p. 360. note. Paul Diaconus, from whom it is supposed that Machiavel has taken this description, writes thus: Septentrionalis plaga quantò magis ab æstu solis remota est, et nivali frigore gelida, tantò salubrior corporibus hominum et propagandis gentibus magis coaptata. Sicut e contrario, omnis meridiana regio, quò solis est fervori vicinior eo morbis est abundantior, et educandis minus apta mortalibus.** Multæque quoque ex eâ, eo quod tantas mortalium turmas germinat, quantas alere vix sufficit, sæpe gentes egressae sunt, quæ non solum partes Asiæ, sed etiam maxime sibi contiguam Europam affixere. (De gestis Longobardorum, l. i. c. i.)

Intra hanc ergo constituti populi, dum in tantam multitudinem pullulassent, ut jam simul habitare non valerent, in tres (ut fertur) partes omnem catervam dividentes, quænam ex illis patriam esset relictura, ut novas sedes exquirerent, sorte disquirunt. Igitur ea pars, cui sors dederit genitale solum excedere, exteraque arva sectari, constitutis supra se duobus ducibus, Ibore scilicet et Agione, qui et Germani erant, et juvenili ætate floridi, ceterisque præstantiores, ad exquirandas quas possint incolere terras, sedesque statuere, valedicentes suis simul et patriæ iter arripiunt. (c. ii.)

redundant population which gave occasion to that law among the Germans, taken notice of by Cæsar and Tacitus, of not permitting their cultivated lands to remain longer than a year under the same possessors.[1] The reasons which Cæsar mentions as being assigned for this custom seem to be hardly adequate; but if we add to them the prospect of emigration, in the manner described by Machiavel, the custom will appear to be highly useful, and a double weight will be given to one of the reasons that Cæsar mentions, namely, lest they should be led, by being accustomed to one spot, to exchange the toils of war for the business of agriculture.[2]

Gibbon very justly rejects, with Hume and Robertson, the improbable supposition that the inhabitants of the north were far more numerous formerly than at present;[3] but he thinks himself obliged at the same time to deny the strong tendency to increase in the northern nations,[4] as if the two facts were necessarily connected. But a care-

[1] De bello Gallico, vi. 22. De moribus German. s. xxvi.

[2] De bello Gallico, vi. 22.

[3] Gibbon, vol. i. c. ix. p. 361.

[4] Id. p. 348.

ful distinction should always be made, between a redundant population and a population actually great. The highlands of Scotland are probably more redundant in population than any other part of Great Britain; and though it would be admitting a palpable absurdity, to allow that the north of Europe, covered in early ages with immense forests and inhabited by a race of people who supported themselves principally by their herds and flocks,[1] was more populous in those times than in its present state; yet the facts detailed in the Decline and Fall of the Roman empire, or even the very slight sketch of them that I have given, cannot rationally be accounted for without the supposition of a most powerful tendency in these people to increase and to repair their repeated losses by the prolific power of nature.

From the first irruption of the Cimbri, to the final extinction of the western empire, the efforts of the German nations to colonize or plunder were unceasing.[2] The numbers that were cut off du-

[1] Tacitus de moribus German. s. v. Cæsar de bell. Gall. vi. 22.

[2] Cæsar found in Gaul a most formidable colony under Ariovistus, and a general dread prevailing that in a few years all the Germans would pass the Rhine. De bell. Gall. i. 31.

ancient inhabitants of the North of Europe.

ring this period by war and famine were almost incalculable, and such as could not possibly have been supported with undiminished vigour by a country thinly peopled, unless the stream had been supplied by a spring of very extraordinary power.

Gibbon describes the labors of Valentinian in securing the Gallic frontier against the Germans, an enemy, he says, whose strength was renewed by a stream of daring volunteers which incessantly flowed from the most distant tribes of the north.[1] An easy adoption of strangers was probably a mode by which some of the German nations renewed their strength so suddenly,[2] after the most destructive defeats; but this explanation only removes the difficulty a little further off. It makes the earth rest upon the tortoise; but does not tell us on what the tortoise rests. We may still ask what northern reservoir supplied this incessant stream of daring adventurers? Montesquieu's solution of the problem will, I think, hardly be admitted. The swarms of barbarians which issued formerly from the north, appear no more, he says, at present; and the reason which he gives is,

[1] Gibbon, vol. iv. c. xxv. p. 283.
[2] Ibid. Note.

that the violences of the Romans had driven the people of the south into the north. As long as this force continued they remained there; but as soon as it was weakened they spread themselves again over every country.

The same phenomenon appeared after the conquests and tyrannies of Charlemagne, and the subsequent dissolution of his empire; and if a prince, he says, in the present days were to make similar ravages in Europe, the nations driven into the north, and resting on the limits of the universe,[1] would there make a stand till the moment when they would inundate or conquer Europe a third time. In a note he observes, we see to what the famous question is reduced—why the north is no longer so fully peopled as in former times?

If the famous question, or rather the answer to it, be reduced to this, it is reduced to a miracle; for without some supernatural mode of obtaining food, how these collected nations could support themselves in such barren regions for so long a period as during the vigor of the Roman empire, it is a little difficult to conceive; and one can

[1] Les nations odossées au limites de l'univers y tiendroient ferme. Grandeur et Décad. des Rom. c. xvi. p. 187.

ancient inhabitants of the North of Europe.

hardly help smiling at the bold figure of these prodigious crowds making their last determined stand on the limits of the universe, and living, as we must suppose, with the most patient fortitude on air and ice for some hundreds of years, till they could return to their own homes, and resume their usual more substantial mode of subsistence.

The whole difficulty, however, is at once removed, if we apply to the German nations at that time a fact which is so generally known to have occurred in America, and suppose, that, when not checked by wars and famine, they increased at a rate that would double their numbers in twenty-five or thirty years. The propriety, and even the necessity, of applying this rate of increase to the inhabitants of ancient Germany will strikingly appear from that most valuable picture of their manners which has been left us by Tacitus. He describes them as not inhabiting cities, or even admitting of contiguous settlements. Every person surrounds his house with a vacant space,[1] a circumstance, which besides its beneficial effect as a security from fire, is strongly calculated to prevent the generation, and check the ravages of epide-

[1] Tacitus de moribus Germ. s. xvi.

mics. They content themselves almost universally with one wife. Their matrimonial bond is strict and severe, and their manners in this respect deserving of the highest praise.[1] They live in a state of well-guarded chastity, corrupted by no seducing spectacles or convivial incitements. Adultery is extremely rare, and no indulgence is shown to a prostitute. Neither beauty, youth, nor riches, can procure her a husband; for none there looks on vice with a smile, or calls mutual seduction the way of the world. To limit the increase of children, or put to death any of the husband's blood, is accounted infamous; and virtuous manners have there more efficacy than good laws elsewhere.[2] Every mother suckles her own children, and does not deliver them into the hands of servants and nurses. The youths partake late of the sextual intercourse, and hence pass the age of puberty unexhausted. Nor are the virgins brought forward. The same maturity, the same full growth is required: the sexes unite equally matched and robust, and the children inherit the vigor of their parents. The more numerous are a

[1] Tacitus de moribus Germ. s. xviii.

[2] Id. s. xix.

ancient inhabitants of the North of Europe.

man's kinsmen and relations, the more comfortable is his old age; nor is it any advantage to be childless.[1]

With these manners, and a habit of enterprise and emigration, which would naturally remove all fears about providing for a family, it is difficult to conceive a society with a stronger principle of increase in it; and we see at once that prolific source of successive armies and colonies against which the force of the Roman empire so long struggled with difficulty, and under which it ultimately sunk. It is not probable that for two periods together, or even for one, the population within the confines of Germany ever doubled itself in twenty-five years. Their perpetual wars, the rude state of agriculture, and particularly the very strange custom adopted by most of the tribes, of making their barriers by extensive deserts,[2] would absolutely prevent any very great actual increase of numbers. At no one period could the country be called well-peopled, though it was often redundant in population. They abandoned their immense forests to the exercise of hunting, employ-

[1] Tacitus de moribus Germ. s. xx.

[2] Cæsar de bell. Gall. vi. 23.

ed in pasturage the most considerable part of their lands, bestowed on the small remainder a rude and careless cultivation, and when the return of famine severely admonished them of the insufficiency of their scanty resources, they accused the sterility of a country which refused to supply the multitude of its inhabitants;[1] but instead of clearing their forests, draining their swamps, and rendering their soil fit to support an extended population, they found it more congenial to their martial habits and impatient dispositions, to go "in quest of food, of plunder, or of glory,"[2] into other countries. These adventurers either gained lands for themselves by their swords, or were cut off by the various accidents of war; were received into the Roman armies, or dispersed over the Roman territory; or perhaps, having relieved their country by their absence, returned home laden with spoils, and ready, after having recruited their diminished numbers, for fresh expeditions. The succession of human beings appears to have been most rapid, and as fast as some were disposed of in colonies, or mowed down by the scythe of war

[1] Gibbon, vol. i. c. ix. p. 360.
[2] Id. c. x. p. 417.

and famine, others rose in increased numbers to supply their place.

According to this view of the subject, the North could never have been exhausted; and when Dr. Robertson, describing the calamities of these invasions, says, that they did not cease till the North, by pouring forth successive swarms, was drained of people, and could no longer furnish instruments of destruction,[1] he will appear to have fallen into the very error which he had before laboured to refute, and to speak as if the northern nations were actually very populous. For they must have been so, if the number of their inhabitants at any one period had been sufficient, besides the slaughter of war, to people in such a manner Thrace, Pannonia, Gaul, Spain, Africa, Italy, and England, as in some parts not to leave many traces of their former inhabitants. The period of the peopling of these countries, however, he himself mentions as two hundred years,[2] and in such a time new generations would arise that would more than supply every vacancy.

The true cause which put a stop to the con-

[1] Robertson's Charles V. vol. i. s. i. p. 11.

[2] Id. vol. i. s. i. p. 7.

tinuance of northern emigration was the impossibility any longer of making an impression on the most desirable countries of Europe. They were then inhabited by the descendants of the bravest and most enterprising of the German tribes; and it was not probable that they should so soon degenerate from the valor of their ancestors, as to suffer their lands to be wrested from them by inferior numbers and inferior skill, though perhaps superior hardihood.

Checked for a time by the bravery and poverty of their neighbors by land, the enterprising spirit and overflowing numbers of the Scandinavian nations soon found vent by sea. Feared before the reign of Charlemagne, they were repelled with difficulty by the care and vigor of that great prince, but during the distractions of the empire under his feeble successors they spread like a devouring flame over Lower Saxony, Friezeland, Holland, Flanders, and the banks of the Rhine as far as Mentz.

After having long ravaged the coasts they penetrated into the heart of France, pillaged and burnt her fairest towns, levied immense tributes on her monarchs, and at length obtained by grant one of the finest provinces of the kingdom. They made

ancient inhabitants of the North of Europe.

themselves even dreaded in Spain, Italy, and Greece, spreading every where desolation and terror. Sometimes they turned their arms against each other, as if bent on their own mutual destruction; at other times transported colonies to unknown or uninhabited countries, as if they were willing to repair in one place the horrid destruction of the human race occasioned by their furious ravages in others.[1]

The maladministration and civil wars of the Saxon kings of England produced the same effect as the weakness which followed the reign of Charlemagne in France,[2] and for two hundred years the British isles were incessantly ravaged, and often in part subdued by these northern invaders. During the eighth, ninth, and tenth centuries, the sea was covered with their vessels from one end of Europe to the other,[3] and the countries, now the most powerful in arts and arms, were the prey of their constant depredations. The growing and consolidating strength of these countries at length removed all further prospect of success from such

[1] Mallet, Introd. à l'Histoire de Dannemarc, tom. i. c. x. p. 221, 223, 224, 12mo. 1766.

[2] Id. p. 226.

[3] Id. p. 221.

invasions.[1] The nations of the north were slowly and reluctantly compelled to confine themselves within their natural limits, and to exchange their pastoral manners, and with them the peculiar facilities of plunder and emigration which they afforded for the patient labors, and slow returns of trade and agriculture. But the slowness of these returns necessarily effected an important change in the manners of the people.

In ancient Scandinavia, during the time of its constant wars and emigrations, few or none probably were ever deterred from marrying by the fear of not being able to provide for a family. In modern Scandinavia, on the contrary, the frequency of the marriage union is continually checked by the most imperious and justly founded apprehensions of this kind. This is most particularly the case in Norway, as I shall have occasion to remark in another place; but the same fears operate in a greater or less degree, though every where with considerable force, in all parts of Europe.

[1] Perhaps the civilized world could not be considered as perfectly secure from another northern or eastern inundation, till the total change in the art of war, by the introduction of gunpowder, gave to improved skill and knowledge the decided advantage over physical force.

ancient inhabitants of the North of Europe.

Happily the more tranquil state of the modern world does not demand such rapid supplies of human beings, and the prolific powers of nature cannot therefore be so generally called into action.

Mallet in the excellent account of the northern nations which he has perfixed to his history of Denmark observes, that he had not been able to discover any proofs that their emigrations proceeded from want of room at home; [1] and one of the reasons which he gives is, that after a great emigration the countries often remained quite deserted and unoccupied for a long time.[2] But instances of this kind I am inclined to think were rare, though they might occasionally happen. With the habits of enterprise and emigration which prevailed in those days, a whole people would sometimes move in search of a more fertile territory. The lands which they before occupied must of necessity be desert for a time; and if there were any thing particularly ineligible in the soil or situation, which the total emigration of the people would seem to imply, it might be more congenial to the temper of the surrounding barbarians, to provide for them-

[1] Hist. Dan. tom. i. c. ix. p. 206.
[2] Id. p. 205, 206.

selves better by their swords, than to occupy immediately these rejected lands. Such total emigrations proved the unwillingness of the society to divide, but by no means that they were not straitened for room and food at home.

The other reason which Mallet gives is, that in Saxony as well as Scandinavia vast tracts of land lay in their original uncultivated state, having never been grubbed up or cleared; and that from the descriptions of Denmark in those times it appeared, that the coasts alone were peopled, but the interior parts formed one vast forest.[1] It is evident that he here falls into the common error of confounding a superfluity of inhabitants with great actual population. The pastoral manners of the people, and their habits of war and enterprise, prevented them from clearing and cultivating their lands;[2] and then these very forests, by restraining the sources of

[1] Hist. Dan. tom. i. c. ix. p. 207.

[2] Nec arare terram aut expectare annum tam facile persuaseris, quam vocare hostes et vulnera mereri; pigrum quinimò et iners videtur sudore acquirere quod possis sanguine parare. Tacitus de mor. Germ. Nothing indeed in the study of human nature is more evident than the extreme difficulty with which habits are changed: and no argument therefore can be more fallacious than to infer, that those people are not pinched with want, who do not make a proper use of their lands.

ancient inhabitants of the North of Europe.

subsistence within very narrow bounds, contributed to a superfluity of numbers, that is, to a population beyond what the scanty supplies of the country could support.

There is another cause not often attended to, why poor, cold, and thinly-peopled countries tend generally to a superfluity of inhabitants, and are strongly prompted to emigration. In warmer and more populous countries, particularly those abounding in great towns and manufactures, an insufficient supply of food can seldom continue long without producing epidemics, either in the shape of great and ravaging plagues, or of less violent, though more constant, sicknesses. In poor, cold, and thinly-peopled countries, on the contrary, from the antiseptic quality of the air, the misery arising from insufficient or bad food may continue a considerable time without producing these effects, and consequently this powerful stimulus to emigration continues to operate for a much longer period.

[a] Epidemics have their seldomer or frequenter returns according to their sundry soils, situations, air, &c. Hence some have them yearly, as Egypt and Constantinople; others once in four or five years, as about Tripoli and Alleppo; others scarce once in ten, twelve, or thirteen years,

Of the checks to population among the

I would by no means, however, be understood to say, that the northern nations never undertook any expeditions unless prompted by straitened food or circumstances at home. Mallet relates what was probably true, that is was their common custom to hold an assembly every spring for the purpose of considering in what quarter they should make war,[1] and among a people who nourished so strong a passion for war, and who considered the right of the strongest as a right divine, occasions for it would never be wanting. Besides this pure and disinterested love of war and enterprise, civil dissensions, the pressure of a victorious enemy, a wish for a milder climate, or other causes, might sometimes prompt to emigration, but in a general view of the subject, I cannot help considering this period of history as affording a very striking illustration of the principle of population; a principle which appears to me to have given the original impulse and spring of action, to have furnished the inexaustible resources, and often prepared the immediate causes of that rapid succession of adven-

as England; others not in less than twenty years, as *Norway and the Northern islands*. Short, history of air, seasons, &c. vol. ii. p. 344.

[1] Hist. Dan. c. ix. p. 209.

[a] ancient inhabitants of the North of Europe.

turous irruptions and emigrations, which occasioned the fall of the Roman empire; and afterwards pouring from the thinly-peopled countries of Denmark and Norway, for above two hundred years ravaged and overran a great part of Europe. Without the supposition of a tendency to increase almost as great among the Americans, the facts appear to me not to be accounted for;[1] and with such a supposition we cannot be at a loss to name the checks to the actual population, when we read the disgusting details of those unceasing wars, and of that prodigal waste of human life, which marked these barbarous periods.

Inferior checks would undoubtedly concur; but we may safely pronounce, that among the shepherds of the North of Europe war and famine were the principal checks that kept the population down to the level of their scanty means of subsistence.

[1] Gibbon, Robertson, and Mallet, seem all rather to speak of Jornandes' expression *vagina nationum* as incorrect and exaggerated: but to me it appears exactly applicable, though the other expression, officina gentium, at least their translation of it, *storehouse of nations*, may not be quite accurate.

Ex hac igitur Scanziâ insulâ, quasi officinâ gentium, aut certè velut vaginâ nationum egressi, &c. Jornandes de rebus Geticis, p. 83.

CHAPTER VII.

Of the Checks to Population among Modern Pastoral Nations.

THE pastoral tribes of Asia, by living in tents and moveable huts instead of fixed habitations, are still less connected with their territory than the shepherds of the North of Europe. The camp and not the soil is the native country of the genuine Tartar. When the forage of a certain district is consumed, the tribes make a regular march to fresh pastures. In the summer it advances towards the north, in the winter returns again to the south; and thus in a time of most profound peace acquires the practical and familiar knowledge of one of the most difficult operations of war. Such habits would strongly tend to diffuse among these wandering tribes the spirit of emigration and conquest. The thirst of rapine, the fear of a too powerful neighbor, or the inconvenience of scanty pastures, have in all ages been sufficient causes to urge the hordes of Scythia boldly to advance into unknown countries, where they might hope to find a more

plentiful subsistence, or a less formidable enemy.[1]

In all their invasions, but more particularly when directed against the civilized empires of the south, the Scythian shepherds have been uniformly actuated by a most savage and destructive spirit. When the Moguls had subdued the northern provinces of China, it was proposed in calm and deliberate council, to exterminate all the inhabitants of that populous country, that the vacant land might be converted to the pasture of cattle. The execution of this horrid design was prevented by the wisdom and firmness of a Chinese mandarin;[2] but the bare proposal of it exhibits a striking picture, not only of the inhuman manner in which the rights of conquest were abused, but of the powerful force of habit among nations of shepherds, and the consequent difficulty of the transition from the pastoral to the agricultural state.

To pursue even in the most cursory manner the tide of emigration and conquest in Asia, the rapid increase of some tribes, and the total extinction of others, would lead much too far. During the periods of the formidable irruptions of the Huns, the

[1] Gibbon, vol. iv. c. xxvi. p. 348.

[2] Id. vol. vi. c. xxxiv. p. 54.

wide extended invasions of the Moguls, the sanguinary conquests of Tamerlane and Aurengzebe, and the dreadful convulsions which attended the dissolution as well as the formation of their empires, the checks to population are but too obvious. In reading of the devastations of the human race in those times, when the slightest motive of caprice or convenience often involved a whole people in indiscriminate massacre, instead of looking for the causes which prevented a further progress in population, we can only be astonished at the force of that principle of increase which could furnish fresh harvests of human beings for the scythe of each successive conqueror. Our inquiries will be more usefully directed to the present state of the Tartar nations, and the ordinary checks to their increase, when not under the influence of these violent convulsions.

The immense country inhabited at present by those descendants of the Moguls and Tartars, who retain nearly the same manners as their ancestors, comprises in it almost all the middle regions of Asia, and possesses the advantage of a very fine and temperate climate. The soil is in general of great natural fertility. There are comparatively

Gibbon, vol. vi. chap. xxxiv. p. 55.

but few genuine deserts. The wide-extended plains without a shrub, which have sometimes received that appellation, and which the Russians call steppes, are covered with a luxuriant grass admirably fitted for the pasture of numerous herds and flocks. The principal defect of this extensive country is a want of water; but it is said that the parts which are supplied with this necessary article would be sufficient for the support of four times the number of its present inhabitants, if it were properly cultivated.[1] Every Orda, or tribe, has a particular canton belonging to it, containing both its summer and winter pastures; and the population of this vast territory, whatever it may be, is probably distributed over its surface nearly in proportion to the degree of actual fertility in the different districts.

Volney justly describes this necessary distribution in speaking of the Bedoweens of Syria: "In "the barren cantons, that is those which are ill "furnished with plants, the tribes are feeble and "very distant from each other; as in the desert "of Suez, that of the Red Sea, and the interior "part of the Great Desert. When the soil is bet-"ter covered, as between Damascus and the Eu-

[1] General Hist. of Tartars, vol. ii. sec. i. 8vo. 1730.

" phrates, the tribes are stronger and less distant. " And in the cultivable cantons, as the Pachalic of " Aleppo, the Hauran, and the country of Gaza, " the incampments are numerous and near each " other.[1]" Such a distribution of inhabitants, according to the quantity of food which they can obtain in the actual state of their industry and habits, may be applied to Grand Tartary, as well as to Syria and Arabia, and is in fact equally applicable to the whole earth, though the commerce of civilized nations prevents it from being so obvious as in the more simple stages of society.

The Mahometan Tartars, who inhabit the western parts of Grand Tartary, cultivate some of their lands, but in so slovenly and insufficient a manner as not to afford a principal source of subsistence.[2] The slothful and warlike genius of the barbarian every where prevails, and he does not easily reconcile himself to the acquiring by labor what he can hope to acquire by rapine. When the annals of Tartary are not marked by any signal wars and revolutions, its domestic peace and industry are constantly interrupted by petty contests, and mutual invasions for the sake of plunder. The Mahome-

[1] Voy. de Volney, tom. i. chap. xxiii. p. 351; 8vo. 1787.
[2] General Hist. Tart. vol. ii. p. 382.

tan Tartars are said to live almost entirely by robbing and preying upon their neighbors, as well in peace as in war.[1]

The Usbecks, who possess as masters the kingdom of Chowarasm, leave to their tributary subjects, the Sarts and Turkmans, the finest pastures of their country, merely because their neighbors on that side are too poor or too vigilant to give them hopes of successful plunder. Rapine is their principal resource. They are perpetually making incursions into the territories of the Persians, and of the Usbecks of Great Bucharia; and neither peace nor truce can restrain them, as the slaves and other valuable effects which they carry off, form the whole of their riches. The Usbecks and their subjects the Turkmans are perpetually at variance; and their jealousies, fomented often by the princes of the reigning house, keep the country in a constant state of intestine commotion.[2] The Turkmans are always at war with the Curds and the Arabs, who often come and break the horns of their herds, and carry away their wives and daughters.[3]

[1] General Hist. Tart. vol. ii. p. 390.

[2] Id. p. 430, 431.

[3] General Hist. Tart. vol. ii. p. 426.

The Usbecks of Great Bucharia are reckoned the most civilized of all the Mahometan Tartars, yet are not much inferior to the rest in their spirit of rapine.[1] They are always at war with the Persians, and laying waste the fine plains of the province of Chorasan. Though the country which they possess is of the greatest natural fertility, and some of the remains of the ancient inhabitants practise the peaceful arts of trade and agriculture; yet neither the aptitude of the soil, nor the example which they have before them, can induce them to change their ancient habits; and they would rather pillage, rob, and kill their neighbors, than apply themselves to improve the benefits which nature so liberally offers them.[2]

The Tartars of the Casatshia Orda in Turkestan live in a state of continual warfare with their neighbors to the north and east. In the winter they make their incursions towards the Kalmucks, who, about that time, go to scour the frontiers of Great Bucharia, and the parts to the south of their country. On the other side they perpetually incommode the Cosacks of the Yaik, the Nogai

[1] General Hist. Tart. vol. ii. p. 459.
[2] Id. p. 455.

among modern Pastoral nations.

Tartars, and the Kalmuck tribes which obey Ajuka Chan. In the summer they cross the mountains of Eagles, and make inroads into Siberia. And though they are often very ill treated in these incursions, and the whole of their plunder is not equivalent to what they might obtain with very little labor from their lands, yet they choose rather to expose themselves to the thousand fatigues and dangers necessarily attendant on such a life, than apply themselves seriously to agriculture.[1]

The mode of life among the other tribes of Mahometan Tartars presents the same uniform picture, which it would be tiresome to repeat, and for which therefore I refer the reader to the Genealogical History of the Tartars, and its valuable notes. The conduct of the author of this history himself, a Chan of Chowarasm, affords a curious example of the savage manner in which the wars of policy, of revenge, or plunder, are carried on in these countries. His invasions of Great Bucharia were frequent, and each expedition was signalized by the ravage of provinces, and the utter ruin and destruction of towns and villages. When at any time the number of his prisoners

[1] General Hist. Tart. vol. ii. p. 573, et seq.

impeded his motions, he made no scruple to kill them on the spot. Wishing to reduce the power of the Turkmans who were tributary to him, he invited all the principal people to a solemn feast, and had them massacred to the number of two thousand. He burnt and destroyed their villages with the most unsparing cruelty, and committed such devastations, that the effect of them returned on their authors, and the army of the victors suffered severely from dearth.[1]

The Mahometan Tartars in general hate trade, and make it their business to spoil all the merchants who fall into their hands.[2] The only commerce that is countenanced is the commerce in slaves. These form a principal part of the booty which they carry off in their predatory incursions, and are considered as a chief source of their riches. Those which they have occasion for themselves, either for the attendance on their herds, or as wives and concubines, they keep, and the rest they sell.[3] The Circassian and Daghestan Tartars, and the other tribes in the neighborhood of Caucasus, living in a poor and mountainous

[1] General Hist. Tart. vol. i. c. xii.
[2] Id. vol. ii. p. 412.
[3] Id. p. 413.

country, and on that account less subject to invasion, generally overflow with inhabitants; and when they cannot obtain slaves in the common way, steal from one another, and even sell their own wives and children.[1] This trade in slaves, so general among the Mahometan Tartars, may be one of the causes of their constant wars; as, when a prospect of a plentiful supply for this kind of traffick offers itself, neither peace nor alliance can restrain them.[2]

The heathen Tartars, the Kalmucks and Moguls, do not make use of slaves, and are said in general to lead a much more peaceable and harmless life, contenting themselves with the produce of their herds and flocks, which form their sole riches. They rarely make war for the sake of plunder; and seldom invade the territory of their neighbors unless to revenge a prior attack. They

[1] General Hist. Tart. vol. ii. p. 413, 414, and ch. xii.

[2] "They justify it as lawful to have many wives, because they say they bring us many children, which we "can sell for ready money, or exchange for necessary "conveniences; yet when they have not wherewithal to "maintain them, they hold it a piece of charity to murder "infants new born, as also they do such as are sick and "past recovery, because they say they free them from a "great deal of misery." Sir John Chardin's Travels. Harris' Col. b. iii. c. ii. p. 865.

are not however without destructive wars. The inroads of the Mahometan Tartars oblige them to constant defence and retaliation; and feuds subsist between the kindred tribes of the Kalmucks and Moguls, which, fomented by the artful policy of the emperor of China, are carried on with such animosity as to threaten the entire destruction of one or other of these nations.[1]

The Bedoweens of Arabia and Syria do not live in greater tranquillity than the inhabitants of Grand Tartary. The very nature of the pastoral state seems to furnish perpetual occasions for war. The pastures which a tribe uses at one period form but a small part of its possessions. A large range of territory is successively occupied in the course of the year; and as the whole of this is absolutely necessary for the annual subsistence of the tribe, and is considered as appropriated, every violation of it, though the tribe may be at a great distance, is held to be a just cause of war.[2] Alli-

[1] General Hist. Tart. vol. ii. p. 545.

[2] Ils se disputeront la terre inculte comme parmi nous les citoyens se disputent les héritages. Ainsi ils trouveront de frequentes occasions de guerre pour la nourriture de leur bestiaux, &c. **** ils auront autant de choses à régler par le droit des gens qu'ils en auront peu à décider par le droit civil. Montes. Esprit des Loix. l. xviii. c. xii.

ances and kindred make these wars more general. When blood is shed more must expiate it; and as such accidents have multiplied in the lapse of years, the greatest part of the tribes have quarrels between them, and live in a state of perpetual hostility.[1] In the times which preceded Mahomet, seventeen hundred battles are recorded by tradition; and a partial truce of two months, which was religiously kept, might be considered, according to a just remark of Gibbon, as still more strongly expressive of their general habits of anarchy and warfare.[2]

The waste of life from such habits might alone appear sufficient to repress their population; but probably their effect is still greater in the fatal check which they give to every species of industry, and particularly to that, the object of which is to enlarge the means of subsistence. Even the construction of a well, or a reservoir of water, requires some funds and labor in advance: and war may destroy in one day the work of many months, and the resources of a whole year.[3] The evils seem mutually to produce each other. A scarcity

[1] Voy. de Volney, tom i. c. xxii. p. 361, 362, 363.
[2] Gibbon, vol. ix. c. l. p. 238, 239.
[3] Voy. de Volney, tom. i. c. xxiii. p. 353.

of subsistence might at first perhaps give occasion to the habits of war, and the habits of war in return powerfully contribute to narrow the means of subsistence.

Some tribes, from the nature of the deserts in which they live, seem to be necessarily condemned to a pastoral life;[1] but even those which inhabit soils proper for agriculture have but little temptation to practise this art, while surrounded by marauding neighbors. The peasants of the frontier provinces of Syria, Persia, and Siberia, exposed as they are to the constant incursions of a devastating enemy, do not lead a life that is to be envied by the wandering Tartar or Arab. A certain degree of security is perhaps still more necessary than richness of soil, to encourage the change from the pastoral to the agricultural state; and where this cannot be attained, the sedentary laborer is more exposed to the vicissitudes of fortune, than he who leads a wandering life, and carries all his property with him.[2] Under the feeble yet oppressive government of the Turks, it is not uncommon for peasants to desert their villages and betake themselves to a pastoral state, in which

[1] Voy. de Volney, tom. i. c. xxxiii. p. 350.
[2] Id. p. 354.

among modern Pastoral nations.

they expect to be better able to escape from the plunder of their Turkish masters and Arab neighbors.[1]

It may be said, however, of the shepherd as of the hunter, that if want alone could effect a change of habits, there would be few pastoral tribes remaining. Notwithstanding the constant wars of the Bedoween Arabs, and the other checks to their increase from the hardships of their mode of life, their population presses so hard against the limits of their food, that they are compelled from necessity to a degree of abstinence, which nothing but early and constant habit could enable the human constitution to support. According to Volney, the lower classes of the Arabs live in a state of habitual misery and famine.[2] The tribes of the desert deny that the religion of Mahomet was made for them. For how, they say, can we preform ablutions when we have no water; how can we give alms when we have no riches; or what occasion can there be to fast during the month of Ramadan, when we fast all the year?[3]

The power and riches of a Chaik consist in the

[1] Voy. de Volney, tom. i. c. xxiii. p. 350.
Id. p. 359.
[3] Id. p. 380.

number of his tribe. He considers it therefore as his interest to encourage population without reflecting how it may be supported. His own consequence much depends on a numerous progeny and kindred;[1] and in a state of society where power generally procures subsistence, each individual family derives strength and importance from its numbers. These ideas act strongly as a bounty upon population, and co-operating with a spirit of generosity which almost produces a community of goods,[2] contribute to push it to its utmost verge, and to depress the body of the people in the most rigid poverty.

The habits of polygamy, where there have been losses of men in war, tend perhaps also to produce the same effect. Niebuhr observes that polygamy multiplies families till many of their branches sink into the most wretched misery.[3] The descendants of Mahomet are found in great numbers all over the east, and many of them in extreme poverty. A Mahometan is in some degree obliged to polygamy from a principle of obedience to his prophet, who makes one of the great duties of man to consist in

[1] Voy. de Volney, tom. i. c. xxiii. p. 366.
[2] Id. p. 378.
[3] Niebuhr's Travels, vol. ii. c. v. p. 207.

procreating children to glorify the Creator. Fortunately individual interest corrects in some degree, as in many other instances, the absurdity of the legislator, and the poor Arab is obliged to proportion his religious obedience to the scantiness of his resources. Yet still the direct encouragements to population are extraordinarily great; and nothing can place in a more striking point of view the futility and absurdity of such encouragements, than the present state of these countries. It is universally agreed, that if their population be not less than formerly, it is indubitably not greater; and it follows as a direct consequence, that the great increase of some families has absolutely pushed the others out of existence. Gibbon, speaking of Arabia observes, that "The measure of population is "regulated by the means of subsistence, and the "inhabitants of this vast peninsula might be out-"numbered by the subjects of a fertile and indus-"trious province.[1]" Whatever may be the encouragements to marriage, this measure cannot be pass-

[1] It is rather a curious circumstance, that a truth so important, which has been stated and acknowledged by so many authors, should so rarely have been pursued to its consequences. People are not every day dying of famine, How then is the population regulated to the measure of the means of subsistence?

ed. While the Arabs retain their present manners, and the country remains in its present state of cultivation, the promise of Paradise to every man who had ten children would but little increase their numbers, though it might greatly increase their misery. Direct encouragements to population have no tendency whatever to change these manners, and promote cultivation. Perhaps indeed they have a contrary tendency, as the constant uneasiness from poverty and want which they occasion must encourage the marauding spirit,[1] and multiply the occasions of war.

Among the Tartars, who from living in a more fertile soil are comparatively richer in cattle, the plunder to be obtained in predatory incursions is greater than among the Arabs. And as the contests are more bloody from the superior strength of the tribes, and the custom of making slaves in general, the loss of numbers in war will be more considerable. These two circumstances united enable some hordes of fortunate robbers to live in a state of plenty, in comparison of their less

[1] Aussi arrive-t'il chaque jour des accidens, des enlevements de bestiaux; et cette guerre de maraude est une de celles qui occupent d'avantage les Arabes. Voy. de Volney, tom. i. ç. xxiii. p. 364.

enterprising neighbors. Professor Pallas gives a particular account of two wandering tribes subject to Russia, one of which supports itself almost entirely by plunder, and the other lives as peacefully as the restlessness of its neighbors will admit. It may be curious to trace the different checks to population that result from these different habits.

The Kirgisiens, according to Pallas,[1] live at their ease in comparison of the other wandering tribes that are subject to Russia. The spirit of liberty and independence which reigns amongst them, joined to the facility with which they can procure a flock sufficient for their maintenance, prevents any of them from entering into the service of others. They all expect to be treated as brothers, and the rich, therefore, are obliged to use slaves. It may be asked what are the causes which prevent the lower classes of people from increasing till they become poor?

Pallas has not informed how far vicious customs

[1] Not having been able to procure the work of Pallas on the history of the Mongol nations, I have here made use of a general abridgment of the works of the Russian travellers, in 4 vols. oct. published at Berne and Lausanne in 1781 and 1784, entitled Découvertes Russes, tom. iii p. 299.

with respect to women, or the restraints on marriage from the fear of a family, may have contributed to this effect, but perhaps the description which he gives of their civil constitution and licentious spirit of rapine may be alone almost sufficient to account for it. The Chan cannot exercise his authority but through the medium of a council of principal persons, chosen by the people; and even the decrees thus confirmed are continually violated with impunity.[1] Though the plunder and capture of persons, of cattle, and of merchandize, which the Kirgisiens exercise on their neighbors the Kazalpacs, the Bucharians, the Persians, the Truchemens, the Kalmucks, and the Russians, are prohibited by their laws, yet no person is afraid to avow them. On the contrary, they boast of their successes in this way as of the most honorable enterprises. Sometimes they pass their frontiers alone to seek their fortune, sometimes collect in troops under the command of an able chief, and pillage entire caravans. A great number of Kirgisiens, in exercising this rapine, are either killed or taken into slavery; but about this the nation troubles itself very little. When these ravages are commit-

[1] Decouv. Russ. tom. iii. p. 389.

ted by private adventurers, each retains what he has taken, whether cattle or women. The male slaves and the merchandize are sold to the rich, or to foreign traders.

With these habits, in addition to their national wars, which from the fickle and turbulent disposition of the tribe are extremely frequent,[2] we may easily conceive that the checks to population from violent causes may be so powerful as nearly to preclude all others. Occasional famines may sometimes attack them in their wars of devastation,[3] their fatiguing predatory incursions, or from long droughts, and mortality of cattle; but in the common course of things the approach of poverty would be the signal for a new marauding expedition; and the poor Kirgisien would either return with sufficient to support him, or lose his life or liberty in the attempt. He who determines to be rich or die, and does not scruple the means, cannot long live poor.

---

[1] Decouv. Russ. tom. iii. p. 396, 397, 398.

[2] Id. p. 378.

[3] Cette multitude dévaste tout ce qui se trouve sur son passage, ils emmenent avec eux tout le bétail qu'ils ne consomment pas, et réduisent à l'esclavage les femmes, les enfans, et les hommes, qu'ils n'ont pas massacrés. Id. p. 390.

The Kalmucks, who before their migration in 1771, inhabited the fertile steppes of the Wolga under the protection of Russia, lived in general in a different manner. They were not often engaged in any very bloody wars;[1] and the power of the Chan being absolute,[2] and the civil administration better regulated than among the Kirgisiens, the marauding expeditions of private adventurers were checked. The Kalmuck women are extremely prolific. Barren marriages are rare, and three or four children are generally seen playing round every hut. From which it may naturally be concluded, Pallas observes, that they ought to have multiplied greatly during the hundred and fifty years that they inhabited tranquilly the steppes of the Wolga. The reasons which he gives for their not having increased so much as might be expected are, the many accidents occasioned by falls from horses, the frequent petty wars between their different princes, and with their different neighbors; and particularly the numbers among the poorer classes who die

[1] Découv. Russ. tom. iii. p. 221. The tribe is described here under the name of the Torgots, which was their appropriate appellation. The Russians called them by the more general name of Kalmucks.

[2] Id. p. 327.

among modern Pastoral nations.

of hunger, of misery, and every species of calamity, of which the children are most frequently the victims.[1]

It appears that when this tribe put itself under the protection of Russia, it had separated from the Soongares, and was by no means numerous. The possession of the fertile steppes of the Wolga and a more tranquil life soon increased it, and in 1662 it amounted to fifty thousand families.[2] From this period to 1771, the time of its migration, it seems to have increased very slowly. The extent of pastures possessed would not probably admit of a much greater population, as at the time of its flight from these quarters, the irritation of the Chan at the conduct of Russia was seconded by the complaints of the people of the want of pasture for their numerous herds. At this time the tribe amounted to between 55 and 60,000 families. Its fate in this curious migration was what has probably been the

[1] Decouv. Russ. tom. iii. p. 319, 320, 321.

[2] Id. p. 221. Tooke's View of the Russian empire, vol. ii. b .ii. p. 30. Another instance of rapid increase presents itself in a colony of baptised Kalmucks, who received from Russia a fertile district to settle in. From 8695, which was its number in 1754, it had increased in 1771 to 14,000. Tooke's View of the Rus. Em. vol. ii. b. ii. p. 32, 33.

fate of many other wandering hordes, who, from scanty pastures or other causes of discontent, have attempted to seek for fresh seats. The march took place in the winter, and numbers perished on this painful journey from cold, famine, and misery. A great part was either killed or taken by the Kirghises; and those who reached their place of destination, though received at first kindly by the Chinese, were afterwards treated with extreme severity.

Before this migration, the lower classes of the Kalmucks had lived in great poverty and wretchedness, and had been reduced habitually to make use of every animal, plant, or root, from which it was possible to extract nourishment.[2] They very seldom killed any of their cattle that were in health, except indeed they were stolen, and then they were devoured immediately for fear of a discovery. Wounded or worn out horses, and beasts that had died of any disease, except a contagious epidemic, were considered as most desirable food. Some of the poorest Kalmucks would eat the most pu-

[1] Tooke's View of the Russian Emp. vol. ii. b. ii. p. 29, 30, 31. Decouv. Rus. tom. iii. p. 221.

[2] Id. p. 275, 276.

trid carrion, and even the dung of their cattle.[1] A great number of children perished of course from bad nourishment.[2] In the winter all the lower classes suffered severely from cold and hunger.[3] In general one third of their sheep, and often much more, died in the winter, in spite of all their care; and if a frost came late in the season after rain and snow, so that the cattle could not get at the grass, the mortality among their herds became general, and the poorer classes of the Kalmucks were exposed to inevitable famine.[4]

Malignant fevers, generated principally by their putrid food and the putrid exhalations with which they were surrounded, and the small-pox which is dreaded like the plague, sometimes thinned their numbers;[5] but in general it appears that their population pressed so hard against the limits of their means of subsistence, that want, with the diseases arising from it, might be considered as the principal check to their increase.

A person travelling in Tartary during the summer months would probably see extensive steppes

[1] Decouv. Rus. tom. iii. p. 272, 273, 274.
[2] Id. p. 324.
[3] Id. p. 310.
[4] Id. p. 270.
[5] Id. p. 311, 312, 313.

unoccupied, and grass in profusion spoiling for want of cattle to consume it. He would infer, perhaps, that the country could support a much greater number of inhabitants, even supposing them to remain in their shepherd state. But this might be a hasty and unwarranted conclusion. A horse or any other working animal is said to be strong only in proportion to the strength of his weakest part. If his legs be slender and feeble, the strength of his body will be but of little consequence; or if he wants power in his back and haunches, the strength which he may possess in his limbs can never be called fully into action. The same reasoning must be applied to the power of the earth to support living creatures. The profusion of nourishment which is poured forth in the seasons of plenty cannot all be consumed by the scanty numbers that were able to subsist through the season of scarcity. When human industry and foresight are directed in the best manner, the population that the soil can support is regulated by the average produce throughout the year; but among animals, and in the uncivilized states of man, it will be much below this average. The Tartar would find it extremely difficult to collect and carry with him such a quantity of hay,

as would feed all his cattle well during the winter. It would impede his motions, expose him to the attacks of his enemies, and an unfortunate day might deprive him of the labors of a whole summer, as in the mutual invasions which occur it seems to be the universal practise to burn and destroy all the forage and provisions which cannot be carried away.[1] The Tartar, therefore, provides only for the most valuable of his cattle during the winter, and leaves the rest to support themselves by the scanty herbage which they can pick up. This poor living, combined with the severe cold, naturally destroys a considerable part of them.[2] The population of the tribe is measured by the population of its herds; and the average numbers of the Tartars, as of the horses that run wild in the desert, are repressed so low by the annual returns of the cold and scarcity of winter, that they cannot consume all the plentiful offerings of summer.

[1] On mit le feu à toutes les meules de bled et de fourrage. **** Cent cinquante villages également incendiés. Mémoires du Baron de Tott, tom. i. p. 272. He gives a curious description of the devastations of a Tartar army, and of its sufferings in a winter campaign. Cette journée couta à l'armée plus de 3,000 hommes, et 30,000 chevaux, qui perirent de froid. p. 267.

[2] Decouvertes Russes, vol. iii. p. 261.

Of the checks to population

Droughts and unfavorable seasons have, in proportion to their frequency, the same effect as the winter. In Arabia[1] and a great part of Tartary[2] droughts are not uncommon; and if the periods of their return be not above six or eight years, the average population can never much exceed what the soil can support during these unfavorable times. This is true in every situation; but perhaps in the shepherd state, man is peculiarly exposed to be affected by the seasons; and a great mortality of parent stock is an evil more fatal and longer felt, than the failure of a crop of grain. Pallas and the other Russian travellers speak of epizooties as very common in these parts of the world.

As among the Tartars a family is always honorable, and women are reckoned very serviceable in the management of the cattle and the household concerns, it is not probable that many are deterred from marriage, from the fear of not being able to support a family.[4] At the same time, as all wives are bought of their parents, it must sometimes

[1] Voy. de Volney, vol. i. c. 23. p. 353.
[2] Decouv. Russ. tom. i. p. 467. ii. p. 10, 11, 12, &c.
[3] Decouv. Russ. tom. i. p. 290, &c. ii. p. 11. iv. p. 304.
[4] General Hist. of the Tartars, vol. ii. p. 407.

be out of the power of the poorer classes to make the purchase. The monk Rubruquis, speaking of this custom, says, that as parents keep all their daughters till they can sell them, their maids are sometimes very stale before they are married.[1] Among the Mahometan Tartars female captives would supply the place of wives;[2] but among the pagan Tartars, who make but little use of slaves, the inability to buy wives must frequently operate on the poorer classes as a check to marriage, particularly as their price would be kept up by the practise of polygamy among the rich.

The Kalmucks are said not to be jealous,[4] and, from the frequency of the venereal disease among them,[5] we may infer that a certain degree of promiscuous intercourse prevails.[3]

On the whole therefore it would appear, that in that department of the shepherd life which has

---

[1] Travels of Wm. Rubruquis in 1253. Harris' Collection of Voy. b. i. c. ii. p. 562.

[2] Decouv. Russ. tom. iii. p 413.

[3] Pallas takes notice of the scarcity of women, or the superabundance of males among the Kalmucks, notwithstanding the more constant exposure of the male sex to every kind of accident. Decouv. Rus. tom. iii. p. 320.

[4] Decouv. Russ. tom iii. p. 239.

[5] Id. p. 324.

been considered in this chapter, the principal checks which keep the population down to the level of the means of subsistence are, restraint, from inability to obtain a wife, vicious customs with respect to women, epidemics, wars, famine, and the diseases arising from extreme poverty. The three first checks and the last appear to have operated with much less force among the shepherds of the North of Europe.

CHAPTER VIII.

Of the Checks to Population in different parts of Africa.

THE parts of Africa visited by Park are described by him as neither well cultivated nor well peopled. He found many extensive and beautiful districts entirely destitute of inhabitants; and in general, the borders of the different kingdoms were either very thinly peopled, or perfectly deserted. The swampy banks of the Gambia, the Senegal, and other rivers towards the coast, appeared to be unfavorable to population, from being unhealthy;[1] but other parts were not of this description; and it was not possible, he says, to behold the wonderful fertility of the soil, the vast herds of cattle proper both for labor and food, and reflect on the means which presented themselves of vast inland navigation, without lamenting that a country so abundantly gifted by nature should remain in its present savage and neglected state.[2]

---

[1] Park's Interior of Africa, c. xx. p. 261. 4to.

[2] Id. c. xxiii. p. 312.

The causes of this neglected state clearly appear—however, in the description which Park gives of the general habits of the negro nations. In a country divided into a thousand petty states, mostly independent and jealous of each other, it is natural to imagine, he says, that wars frequently originate from very frivolous provocations. The wars of Africa are of two kinds, one called killi, that which is openly avowed; and the other, tegria, plundering or stealing. These latter are very common, particularly about the beginning of the dry season when the labors of harvest are over, and provisions are plentiful. These plundering excursions always produce speedy retaliation.[1]

The insecurity of property arising from this constant exposure to plunder, must necessarily have a most baneful effect on industry. The deserted state of all the frontier provinces sufficiently proves to what degree it operates. The nature of the climate is unfavorable to the exertion of the negro nations; and, as there are not many opportunities of turning to advantage the surplus produce of their labor, we cannot be surprised that they should in general content themselves with cultivating only as much

[1] Park's Africa, c. xxii. p. 291 & seq.

ground as is necessary for their own support.[1] These causes appear adequately to account for the uncultivated state of the country.

The waste of life in these constant wars and predatory incursions must be considerable; and Park agrees with Buffon in stating, that, independent of violent causes, longevity is rare among the negroes. At forty, he says, most of them become grayhaired and covered with wrinkles, and but few of them survive the age of fifty-five or sixty.[2] Buffon attributes this shortness of life to the premature intercourse of the sexes, and very early and excessive debauchery.[3] On this subject perhaps he has been led into exaggerations; but, without attributing too much to this cause, it seems agreeable to the analogy of nature to suppose, that as the natives of hot climates arrive much earlier at maturity

[1] Park's Africa, c. xxi. p. 280.

[2] Id. p. 274.

[3] L'usage prématuré des femmes est peut-être la cause de la briéveté de leur vie; les enfans sont si débauchés, et si peu contraints par les pères et mères, que des leur plus tendre jeunesse ils se livrent à tout ce que la nature leur suggére, rien n'est si rare que de trouver dans ce peuple quelque fille qui puisse se souvenir du tems auquel elle a cessée d'etre vierge. Histoire Naturelle de l'Homme, vol. vi. p. 2355; 5th edit. 12mo. 31. vols.

than the inhabitants of colder countries, they should also perish earlier.

According to Buffon, the negro women are extremely prolific; but it appears from Park, that they are in the habit of suckling their children two or three years, and as the husband during this time devotes the whole of his attention to his other wives, the family of each wife is seldom numerous.[1] Polygamy is universally allowed among the negro nations,[2] and consequently without a greater superabundance of women than we have reason to suppose, many will be obliged to live unmarried. This hardship will principally fall on the slaves, who according to Park are in the proportion of three to one to the free men.[3] A master is not permitted to sell his domestic slaves, or those born in his own house, except in case of famine, to support himself and family. We may imagine there-

[1] Park's Africa, c. xx. p. 265. As the accounts of Park, and those on which Buffon has founded his observations, are probably accounts of different nations, and certainly at different periods, we cannot infer that either is incorrect because they differ from each other: but as far as Park's observations extend, they are certainly entitled to more credit than any of the travellers which preceded him.

[2] Id. c. xx. p. 267.

[3] Id. c. xxii. p. 287.

fore, that he will not suffer them to increase beyond the employment which he has for them.

The slaves which are purchased, or the prisoners taken in war, are entirely at the disposal of their masters.[1] They are often treated with extreme severity, and in any scarcity of women arising from the polygamy of the free men, would of course be deprived of them without scruple. Few or no women, probably, remain in a state of strict celibacy; but in proportion to the number married, the state of society does not seem to be favorable to increase.

Africa has been at all times the principal mart of slaves. The drains of its population in this way have been great and constant, particularly since their introduction into the European colonies; but perhaps, as Dr. Franklin observes, it would be difficult to find the gap that has been made by a hundred years exportation of negroes which has blackened half America.[2] For, notwithstanding this constant emigration, the loss of numbers from incessant war, and the checks to increase from vice and other causes, it appears that the population is

[1] Park's Africa, c. xxii. p. 288.
[2] Franklin's Miscell. p. 9.

continually passing beyond the means of subsistence. According to Park, scarce years and famines are frequent. Among the four principal causes of slavery in Africa, he mentions famine next to war;[1] and the express permission given to masters to sell their domestic slaves for the support of their family, which they are not allowed to do on any less urgent occasion, seems to imply the not infrequent recurrence of severe want. During a great scarcity which lasted for three years in the countries of the Gambia, great numbers of people became slaves. Park was assured by Dr. Laidley, that at that time many free-men came, and begged with great earnestness to be put upon his slave chain to save them from perishing with hunger.[2]

While Park was in Manding, a scarcity of provisions was severely felt by the poor, as the following circumstance painfully convinced him. Every evening during his stay, he observed five or six women come to the Mansa's house, and receive each of them a certain quantity of corn. "Observe that boy," said the Mansa to him, pointing to a fine child about five years of age—"his mother

[1] Park's Africa, c. xxii. p. 295.

[2] Id. p. 288. Note.

[3] Id. p. 295.

in different parts of Africa.

" has sold him to me for forty days provision for " herself and the rest of her family. I have bought " another boy in the same manner."[1] In Sooseeta, a small Jallonka village, Mr. Park was informed by the master that he could furnish no provisions, as there had lately been a great scarcity in that part of the country. He assured him, that before they had gathered in their present crops, all the inhabitants of Kullo had been for twenty-nine days without tasting corn; during which time they had supported themselves entirely on the yellow powder which is found in the pods of the nitta, so called by the natives, a species of mimosa, and upon the seeds of the bamboo cane, which, when properly pounded and dressed, taste very much like rice.[2]

It may be said, perhaps, that as, according to Park's account, much good land remains uncultivated in Africa, the dearths may be attributed to a want of people; but if this were the case, we can hardly suppose that such numbers would yearly be sent out of the country. What the negro nations really want is security of property, and its general concomitant, industry; and without these, an increase of people would only greatly aggravate their

[1] Park's Africa, c. xix. p. 248.
[2] Id. c. xxv. p. 336.

distresses. If, in order to fill up those parts that appeared to be deficient in inhabitants, we were to suppose a high bounty given on children, the effects would probably be, the increase of wars, the increase of the exportation of slaves, and a great increase of misery, but little or no real increase of population.

The customs of some nations, and the prejudices of all, operate in some degree like a bounty of this kind. The Shangalla negroes, according to Bruce, hemmed in on every side by active and powerful enemies, and leading a life of severe labor and of constant apprehension, feel but little desire for women. It is the wife and not the man, that is the cause of their polygamy. Though they live in separate tribes or nations, yet these nations are again subdivided into families. In fighting each family attacks and defends by itself, and theirs is the spoil and plunder who take it. The mothers therefore, sensible of the disadvantages of a small family, seek to multiply it by all the means in their power; and it is by their importunity, that the husband suffers himself to be overcome.[1] The

[1] Bruce's Travels to discover the Source of the Nile, vol. ii. p. 556. 4to.

in different parts of Africa.

motives to polygamy among the Galla are described to be the same, and in both nations the first wife courts the alliance of a second for her husband; and the principal argument that she makes use of is, that their families may be joined together and be strong, and that her children, by being few in number, may not fall a prey to their enemies in the day of battle.[1] It is highly probable that this extreme desire of having large families defeats its own purpose; and that the poverty and misery which it occasions cause fewer children to grow up to maturity, than if the parents had confined their attention to the rearing of a smaller number.

Bruce is a great friend to polygamy, and defends it in the only way in which it is capable of being defended by asserting, that, in the countries in which it principally prevails, the proportion of girls to boys born, is two or three to one. A fact so extraordinary, however, cannot be admitted upon the authority of those vague inquiries on which he founds his opinion. That there are considerably more women living than men in these climates, is in the highest degree probable. Even in Europe, where it is known with certainty that more boys

[1] Bruce's Travels to discover the Source of the Nile, vol. ii. p. 223.

are born than girls, the women in general exceed the men in number; and we may imagine, that, in hot and unhealthy climates, and in a barbarous state of society, the accidents to which the men are exposed must be very greatly increased. The women by leading a more sedentary life, would suffer less from the effects of a scorching sun and swampy exhalations. They would in general be more exempt from the disorders arising from debauchery; but above all, they would escape in great measure the ravages of war. In a state of society in which hostilities never cease, the drains of men from this cause alone must occasion a great disproportion of the sexes, particularly where it is the custom, as related of the Galla in Abyssinia,[1] to massacre indiscriminately all the males, and save only the marriageable women from the general destruction. The actual disproportion of the sexes arising from these causes probably first gave rise to the permission of polygamy, and has perhaps contributed to make us more easily believe, that the proportion of male and female children in hot climates is very different from what we have experienced it to be in the temperate zone.

[1] Bruce's Travels to discover the Source of the Nile, vol. iv. p. 411.

in different parts of Africa.

Bruce, with the usual prejudices on this subject, seems to think that the celibacy of a part of the women is fatal to the population of a country. He observes of Jidda, that, on account of the great scarcity of provisions, which is the result of an extraordinary concourse of people to a place almost destitute of the necessaries of life, few of the inhabitants can avail themselves of the privilege granted by Mahomet. They cannot, therefore, marry more than one wife; and from this cause arises, he says, the want of people and the large number of unmarried women.[1] But it is evident, that the want of people in this barren spot arises solely from the want of provisions, and that if each man had four wives, the number of people could not be much increased by it.

In Arabia Felix, according to Bruce, where every sort of provision is exceedingly cheap, where the fruits of the ground, the general food of man, are produced spontaneously, the support of a number of wives costs no more than that of so many slaves or servants; their food is the same, and a blue cotton shirt, a habit common to them all, is not more chargeable for the one than for the

[1] Bruce, vol. i. c. xi. p. 280.

other. The consequence is, he says, that celibacy in women is prevented, and the number of people increased in a fourfold ratio by polygamy, to what it is in those countries that are monogamous.[1] And yet, notwithstanding this fourfold increase, it does not appear that any part of Arabia, is really very populous.

The effect of polygamy in increasing the number of married women and preventing celibacy is beyond dispute; but how far this may tend to increase the actual population, is a very different consideration. It may perhaps contribute to press the population harder against the limits of the food; but the squalid and hopeless poverty which this occasions is by no means favorable to industry; and in a climate in which there appears to be many predisposing causes of sickness, it is difficult to conceive that this state of wretchedness does not powerfully contribute to the extraordinary mortality, which has been observed in some of these countries.

According to Bruce, the whole coast of the Red Sea, from Suez to Babelmandel, is extremely unwholesome, but more especially between the

[1] Bruce, vol. i. c. xi. p. 281.

in different parts of Africa.

tropics. Violent fevers, called there nedâd, make the principal figure in this fatal list, and generally terminate the third day in death.[1] Fear frequently seizes strangers upon the first sight of the great mortality which they observe on their first arrival.

Jidda, and all the parts of Arabia adjacent to the eastern coast of the Red Sea are in the same manner very unwholesome.[2]

In Gondar, fevers perpetually reign, and the inhabitants are all the color of a corpse.[3]

In Sirè, one of the finest countries in the world, putrid fevers of the very worst kind are almost constant.[4] In the low grounds of Abyssinia, in general, malignant tertians occasion a great mortality.[5] And every where, the small-pox makes great ravages, particularly among the nations bordering on Abyssinia, where it sometimes extinguishes whole tribes.[6]

The effect of poverty, bad diet, and its almost constant concomitant want of cleanliness, in agravating malignant distempers, is well known; and

[1] Bruce, vol. iii. p. 33.
[2] Id. vol. i. p. 279.
[3] Id. vol. iii. p. 178.
[4] Id. p. 153.
[5] Id. vol. iv. p. 22.
[6] Id. vol. iii. c. iii. p. 68. c. vii. p. 178. vol. i. c. xiii. p. 353.

this kind of wretchedness seems generally to prevail. Of Tchagassa, near Gondar, Bruce observes, that the inhabitants, nothwithstanding their threefold harvests are miserably poor.[1] At Adowa, the capital of Tigrè, he makes the same remark, and applies it to all the Abyssinian farmers. The land is let yearly to the highest bidder, and in general the landlord furnishes the seed on condition to receive half of the produce; but it is said that he is a very indulgent master who does not take another quarter for the risk he has run; so that the quantity which comes to the share of the husbandman is not more than sufficient to afford a bare sustenance to his wretched family.[2]

The Agows, one of the most considerable nations of Abyssinia in point of number, are described by Bruce as living in a state of misery and penury, scarcely to be conceived. We saw a number of women, he says, wrinkled and sunburnt, so as scarcely to appear human, wandering about under a burning sun, with one and sometimes two children upon their backs, gathering the seeds of bent grass to make a kind of bread.[3] The Agow

[1] Bruce, vol. iii. c. vii. p. 195.
[2] Id. vol. iii. c. v. p. 124.
[3] Id. c. xix. p. 738.

in different parts of Africa.

women begin to bear children at eleven years old. They marry generally about that age, and there is no such thing as barrenness known among them.[1] In Dixan, one of the frontier towns of Abyssinia, the only trade is that of selling children. Five hundred are exported annually to Arabia; and in times of scarcity, Bruce observes, four times that number.[2]

In Abyssinia polygamy does not regularly prevail. Bruce, indeed, makes rather a strange assertion on this subject, and says, that though we read from the Jesuits a great deal about marriage and polygamy, yet that there is nothing which may be averred more truly, than that there is no such thing as marriage in Abyssinia.[3] But, however this may be, it appears clear, that few or no women live a life of celibacy in Abyssinia, and that the prolific powers of nature are nearly all called into action, except as far as they are checked by promiscuous intercourse. This, however, from the state of manners described by Bruce, must operate very powerfully.[4]

[1] Bruce, vol. iii. c. xix. p. 739.
[2] Id. vol. iii. c. iii. p. 88.
[3] Id. c. xi. p. 396.
[4] Id. p. 292.

Of the checks to population

The check to population from war appears to be excessive. For the last four hundred years, according to Bruce, it has never ceased to lay desolate this unhappy country;[1] and the savage manner in which it is carried on surrounds it with tenfold destruction. When Bruce first entered Abyssinia, he saw on every side ruined villages destroyed to the lowest foundation by Ras Michael in his march to Gondar.[2] In the course of the civil wars, while Bruce was in the country, he says, "The rebels had begun to lay waste Dembea, "and burnt all the villages in the plain, from "south to west; making it like a desert, between "Michael and Fasil. **** The king often as- "cended to the top of the tower of his palace, and "contemplated with the greatest displeasure, the "burning of his rich villages in Dembea."[3] In another place, he says, "the whole country of "Degwessa was totally destroyed; men, women, "and children were entirely extirpated, without "distinction of age or sex; the houses rased to "the ground, and the country about it left as "desolate as after the deluge. The villages be-

[1] Bruce, vol. iv. p. 119.
[2] Id. vol. iii. c. vii. p. 192.
[3] Id. vol. iv. c. v. p. 112.

"longing to the king were as severely treated; a "universal cry was heard from all parts, but no one "dared to suggest any means of help."[1] In Maitha, one of the provinces of Abyssinia he was told, that if ever he met an old man, he might be sure that he was a stranger, as all that were natives died by the lance young.[2]

If the picture of the state of Abyssinia drawn by Bruce be in any degree near the truth, it places in a strong point of view the force of that principle of increase, which preserves a population fully up to the level of the means of subsistence, under the checks of war, pestilential diseases, and promiscuous intercourse, all operating in an excessive degree.

The nations which border on Abyssinia, are universally short-lived. A Shangalla woman at twenty-two is, according to Bruce, more wrinkled and deformed by age than is a European woman at sixty.[3] It would appear therefore, that, in all these countries, as among the northern shepherds, in the times of their constant emigrations, there is a very rapid succession of human beings, and the difference in the two instances is, that our northern

[1] Bruce, vol. iv. p. 258.
[2] Id. c. i. p. 14.
[3] Id. vol. ii. p. 559.

ancestors died out of their own country, whereas these die at home. If accurate registers of mortality were kept among these nations, I have little doubt that it would appear, that, including the mortality from wars, 1 in 17 or 18 at the least dies annually, instead of 1 in 34 or 36, as in the generality of European states.

The description which Bruce gives of some parts of the country, which he passed through on his return home, presents a picture more dreadful even than the state of Abyssinia, and shows how little population depends on the birth of children, in comparison of the production of food, and of those circumstances of natural and political situation which influence this produce.

"At half past six," Bruce says, "we arrived "at Garigana, a village whose inhabitants had all "perished with hunger the year before; their "wretched bones being all unburied, and scattered "upon the surface of the ground where the village "formerly stood. We encamped among the "bones of the dead; no space could be found free "from them."[1]

Of another town or village in his route he ob-

[1] Bruce, vol. iv. p. 349.

in different parts of Africa.

serves, "The strength of Teawa was 25 horse. "The rest of the inhabitants might be 1200, naked, "miserable, and despicable Arabs, like the rest "of those which live in villages.****Such was "the state of Teawa. Its consequence was only "to remain till the Daveina Arabs should resolve "to attack it, when its cornfields being burnt and "destroyed in a night, by a multitude of horsemen, "the bones of its inhabitants scattered upon the "earth would be all its remains, like those of the "miserable village of Garigana.[1]

"There is no water between Teawa and Beyla. "Once Ingedidema and a number of villages "were supplied with water from wells, and had "large crops of Indian corn sown about their pos- "sessions. The curse of that country the Arabs "Daveina have destroyed Ingedidema, and all the "villages about it; filled up their wells, burnt their "crops, and exposed all the inhabitants to die by "famine."

Soon after leaving Sennaar, he says, "We be- "gan now to see the effects of the quantity of rain "having failed. There was little corn sown, and "that so late, as to be scarcely above ground. It

[1] Bruce, vol. iv. p. 353.
[2] Id. p. 411.

" seems the rains begin later as they pass north-
" ward. Many people were here employed in
" gathering grass-seeds to make a very bad kind
" of bread. These people appear perfect skele-
" tons, and no wonder, as they live upon such fare.
" Nothing increases the danger of travelling and
" prejudice against strangers more than the scarci-
" ty of provisions in the country through which
" you are to pass.[1]

" Came to Eltic, a straggling village about half
" a mile from the Nile, in the north of a large bare
" plain; all pasture, except the banks of the river
" which are covered with wood. We now no
" longer saw any corn sown. The people here
" were at the same miserable employment as those
" we had seen before, that of gathering grass-
" seeds."[2]

Under such circumstances of climate and political situation, though a greater degree of foresight, industry, and security, might considerably better their condition, and increase their population, the birth of a greater number of children without these concomitants would only aggravate

[1] Bruce, vol. iv. p. 511.
[2] Id. p. 511.

their misery, and leave their population where it was.

The same may be said of the once flourishing and populous country of Egypt. Its present depressed state has not been caused by the weakening of the principle of increase, but by the weakening of the principle of industry and foresight, from the insecurity of property consequent on a most tyrannical and oppressive government. The principle of increase in Egypt at present does all that is possible for it to do. It keeps the population fully up to the level of the means of subsistence; and, were its power ten times greater than it really is, it could do no more.

The remains of ancient works, the vast lakes, canals, and large conduits for water destined to keep the Nile under control, serving as reservoirs to supply a scanty year, and as drains and outlets to prevent the superabundance of water in wet years, sufficiently indicate to us, that the ancients by art and industry contrived to fertilize a much greater quantity of land from the overflowings of their river than is done at present; and to prevent, in some measure, the distresses which are now so frequently experienced from a redundant or insuf-

ficient inundation.[1] It is said of the governor Petronius, that, effecting by art what was denied by nature, he caused abundance to prevail in Egypt under the disadvantages of such a deficient inundation, as had always before been accompanied by dearth.[2] A flood too great is as fatal to the husbandman, as one that is deficient; and the ancients had, in consequence, drains and outlets to spread the superfluous waters over the thirsty sands of Lybia, and render even the desert habitable. These works are now all out of repair, and by ill management often produce mischief instead of good. The causes of this neglect, and consequently of the diminished means of subsistence, are obviously to be traced to the extreme ignorance and brutality of the government, and the wretched state of the people. The Mamelukes, in whom the principal power resides, think only of enriching themselves, and employ for this purpose what appears to them to be the simplest method, that of seizing wealth wherever it may be found, of wresting it by violence from the possessor, and of imposing continually new and ar-

[1] Bruce, vol. iii. c. xvii. p. 710.

[2] Voyage de Volney, tom. i. c. iii. p. 33. 8vo.

bitrary contributions.[1] Their ignorance and brutality, and the constant state of alarm in which they live, prevent them from having any views of enriching the country, the better to prepare it for their plunder. No public works therefore are to be expected from the government, and no individual proprietor dares to undertake any improvement which might imply the possession of capital, as it would probaly be the immediate signal of his destruction. Under such circumstances we cannot be surprised, that the ancient works are neglected, that the soil is ill cultivated, and that the means of subsistence, and consequently the population, are greatly reduced. But such is the natural fertility of the Delta from the inundations of the Nile, that even without any capital employed upon the land, without a right of succession, and consequently almost without a right of property, it still maintains a considerable population in proportion to its extent; sufficient if property were secure, and industry well directed, gradually to improve and extend the cultivation of the country, and restore it to its former state of prosperity. It may

[1] Voyage de Volney, tom. i. c. xii. p. 170.

be safely pronounced of Egypt, that it is not the want of population that has checked its industry, but the want of industry that has checked its population.

The immediate causes which keep down the population to the level of the present contracted means of subsistence are but too obvious. The peasants are allowed for their maintenance only sufficient to keep them alive.[1] A miserable sort of bread made of dourra without leven or flavor, cold water, and raw onions make up the whole of their diet. Meat and fat, of which they are passionately fond, never appear but on great occasions, and among those who are more at their ease. Their habitations are huts made of earth, where a stranger would be suffocated with the heat and smoke; and where the diseases that are generated by want of cleanliness, by moisture and by bad nourishment, often visit them and commit great ravages. To these physical evils are added a constant state of alarm, the fear of the plunder of the Arabs, and the visits of the Mamelukes, the spirit of revenge that is transmitted in families, and all the evils of a continued civil war.[2]

[1] Voyage de Volney, tom. i. c. xii. p. 172.

[2] Volney, tom. i. c. xii. p. 173. This sketch of the

in different parts of Africa.

In the year 1783, the plague was very fatal; and in 1784, and 1785, a dreadful famine reigned in Egypt, from a deficiency in the inundations of the Nile. Volney draws a frightful picture of the misery that was suffered on this occasion. The streets of Cairo, which at first were full of beggars, were soon cleared of all these objects, who either perished or fled. A vast number of unfortunate wretches, in order to escape death, spread themselves over all the neighboring countries, and the towns of Syria were inundated with Egyptians. The streets and public places were crowded with extenuated and dying skeletons. All the most revolting modes of satisfying the cravings of hunger were resorted to; the most disgusting food was devoured with eagerness; and Volney mentions the having seen, under the walls of ancient Alexandria, two miserable wretches seated on the carcase of a camel, and disputing with the dogs its putrid flesh. The depopulation of the two years was estimated at one sixth of all the inhabitants.[1]

state of the peasantry in Egypt given by Volney seems to be nearly confirmed by all the other writers on the subject; and particularly in a valuable paper intitled, *Considerations générales sur l'Agriculture de l'Egypte, par L. Reynier.* (Mémoires sur l'Egypte, tom. iv. p. 1.)

[1] Voy. de Volney, tom. i. c. xii. s. ii.

CHAPTER IX.

Of the Checks to Population in Siberia, Northern and Southern.

THE inhabitants of the most northern parts of Asia subsist chiefly by hunting and fishing; and we may suppose, therefore, that the checks to their increase are of the same nature as those which prevail among the American Indians; except that the check from war, is considerably less, and the check from famine perhaps greater than in the temperate regions of America. M. de Lesseps, who travelled from Kamtschatka to Petersburg with the papers of the unfortunate Pérouse, draws a melancholy picture of the misery that is sometimes suffered in this part of the world from a scarcity of food. He observes while at Bolcheretsk, a village of Kamtschatka, "very heavy rains "are injurious in this country, because they occa- "sion floods, which drive the fish from the rivers. "A famine, the most distressing to the poor "Kamtschadales, is the result, as it happened last "year in all the villages along the western coast of "the peninsula. This dreadful calamity occurs so

" frequently in this quarter, that the inhabitants are " obliged to abandon their dwellings, and repair " with their families to the borders of the Kamt- " schatka river, where they hope to find better re- " sources, fish being more plentiful in this river. " Mr. Kasloff (the Russian officer who conducted " M. de Lesseps) had intended to proceed along the " western coast; but the news of this famine de- " termined him contrary to his wishes to return, " rather than be driven to the necessity of stop- " ping half way, or perishing with hunger."[1] Though a different route was pursued, yet in the course of the journey almost all the dogs which drew the sledges died for want of food; and every dog, as soon as he failed, was immediately devoured by the others.[2]

Even at Okotsk, a town of considerable trade, the inhabitants wait with hungry impatience for the breaking up of the river Okhota in the spring. When M. de Lesseps was there, the stock of dried fish was nearly exhausted. Meal was so dear that the common people were unable to purchase it.

[1] Travels in Kamtschatka, vol. i. p. 147. 8vo. Eng. trans. 1790.

[2] Id. p. 264.

On drawing the seine prodigious numbers of small fish were caught, and the joy and clamor redoubled at the sight. The most famished were first served. M. de Lesseps feelingly says, "I could "not refrain from tears on perceiving the rave- "nousness of these poor creatures;****whole "families contended for the fish, which were de- "voured raw before my eyes."[1]

Throughout all the northern parts of Siberia, the small pox is very fatal. In Kamtschatka, according to M. de Lesseps, it has carried off three fourths[2] of the native inhabitants.

Pallas confirms this account; and in describing the Ostiacks on the Obi who lived nearly in the same manner, observes, that this disorder makes dreadful ravages among them, and may be considered as the principal check to their increase[3] The extraordinary mortality of the small pox among these people is very naturally accounted for, by the extreme heat, filth, and putrid air, of their underground habitations. Three or four Ostiack families are crowded together in one yourt, and nothing

[1] Travels in Kamtschatka, vol. ii. p. 252, 253.

[2] Id. vol. i. p. 128.

[3] Voy de Pallas, tom. iv. p. 68. 4to. 5 vols. 1788. Paris.

can be so disgusting as their mode of living. They never wash their hands, and the putrid remains of the fish, and the excrements of the children, are never cleared away. From this description says Pallas, one may easily form an idea of the stench, the foetid vapors, and humidity of their yourts.[1] They have seldom many children. It is a rare thing to see three or four in one family. The reason which Pallas gives is, that so many die young on account of their bad nourishment.[2] To this, perhaps, should be added the state of miserable and laborious servitude to which the women are condemned,[3] which certainly prevents them from being prolific.

The Samoyedes, Pallas thinks, are not quite so dirty as the Ostiacks, because they are more in motion during the winter in hunting; but he describes the state of the women amongst them as still more wretched and laborious servitude;[4] and consequently the check to population from this cause would be greater.

---

[1] Voy. de Pallas, tom. iv. p. 60.
[2] Id. p. 72.
[3] Id. p. 60.
[4] Id. p. 92.

Of the checks to population in

Most of the natives of these inhospitable regions live nearly in the same miserable manner, which it would be therefore mere repetition to describe. From what has been said we may form an idea of the principal checks that keep the actual population down to the level of the scanty means of subsistence which these dreary countries afford.

In some of the southern parts of Siberia, and in the districts adjoining the Wolga, the Russian travellers describe the soil to be of extraordinary fertility. It consists in general of a fine black mould of so rich a nature as not to require or even to bear dressing. Manure only makes the corn grow too luxuriantly, and subjects it to fall to the ground and be spoiled. The only mode of recruiting this kind of land which is practised is, by leaving it one year out of three in fallow, and proceeding in this way, there are some grounds, the vigor of which is said to be inexhaustible[1]. Yet notwithstanding the facility with which, as it would appear, the most plentiful subsistence might be procured, many of these districts are thinly peo-

[1] Voy. de Pallas, tom. iv. p. 5.

Siberia, Northern and Southern.

pled, and in none of them, perhaps, does population increase in the proportion that might be expected from the nature of the soil.

Such countries seem to be under that moral impossibility of increasing, which is well described by Sir James Steuart[1]. Man, though he may often be produced without a sufficient demand for him, cannot really multiply and prosper unless his labor be wanted; and the reason that the population goes on so slowly in these countries is, that there is very little demand for men. The mode of agriculture is described to be extremely simple, and to require very few laborers. In some places the seed is merely thrown on the fallow[2]. The buckwheat is a common culture; and though it is sown very thin, yet one sowing will last five or six years, and produce every year twelve or fifteen times the original quantity. The seed which falls during the time of the harvest is sufficient for the next year, and it is only necessary to pass a harrow once over it in the spring. And this is continued till the fertility of the soil begins to diminish. It is observed, very justly, that the cultivation of no

[1] Polit. Econ. b. i. c. v. p. 30. 4to.

[2] Voy. de Pallas, tom. i. p. 250.

kind of grain can so exactly suit the indolent inhabitants of the plains of Siberia[1].

With such a system of agriculture, and with few or no manufactures, the demand for men must be very easily satisfied. Corn will undoubtedly be very cheap; but labor will be in proportion still cheaper. Though the farmer may be able to provide an ample quantity of food for his own children, yet the wages of his labor will not be sufficient to enable him to rear up a family with ease.

If, from observing the deficiency of population, compared with the fertility of the soil, we were to endeavor to remedy it by giving a bounty upon children, and thus enabling the laborer to rear up a greater number; what would be the consequence? Nobody would want the work of these supernumerary laborers that were thus brought into the market. Though the ample subsistence of a man for a day might be purchased for a penny, yet nobody will give these people a farthing for their labor. The farmer is able to do all that he wishes, all that he thinks necessary in the cul-

[1] Découv. Russ. vol. iv. p. 329. 8vo. 4 vol. Berne.

tivation of the soil, by means of his own family, and the one or two laborers which he might have before. As these people, therefore, can give him nothing that he wants, it is not to be expected that he should overcome his natural indolence, and undertake a larger and more troublesome concern, merely to provide them gratuitously with food. In such a state of things, when the very small demand for manufacturing labor is satisfied, what are the rest to do? They are, in fact, as completely without the means of subsistence as if they were living upon a barren sand. They must either emigrate to some place where their work is wanted, or perish miserably of poverty. Should they be prevented from suffering this last extremity by a scanty subsistence given to them, in consequence of a scanty and only occasional use of their labor, it is evident that though they might exist themselves they would not be in a capacity to marry and continue to increase the population.

It might be supposed perhaps, that if there were much good land unused, the redundant population would naturally betake itself to the cultivation of it, and raise its own food. But though there are many countries where good land remains uncultivated, there are very few where it may be

obtained by the first person who chooses to occupy it. Even were this the case there would be still some obstacles remaining. The supernumerary laborer whom I have described has no funds whatever that can enable him to build a house, to purchase stock and utensils, and to subsist till he has brought his new land into proper order, and obtained an adequate return. Even the children of the farmer, when they grow up, would find it very difficult to obtain these necessary funds. In a state of society where the market for corn is extremely narrow, and the price very low, the cultivators are always poor; and though they may be able amply to provide for their family in the simple article of food; yet they cannot realise a capital to divide among their children, and enable them to undertake the cultivation of fresh land. Though this necessary capital might be very small, yet even this small sum the farmer perhaps cannot acquire; for when he grows a greater quantity of corn than usual, he finds no purchaser for it,[1] and cannot convert it into any permanent article which will en-

[1] Il y a fort peu de débit dans le pays, parce que le plupart des habitans sont cultivateurs et élevent eux mêmes des bestiaux. Voy. de Pallas, tom. iv. p. 4.

able any of his children to command an equivalent portion of subsistence or labor in future.[1] In general, therefore, he contents himself with growing only what is sufficient for the immediate demands of his family, and the narrow market to which he is accustomed. And if he has a large family, many of his children probably fall into the rank of laborers, and their further increase is checked as in the case of the laborer before described, by a want of the means of subsistence.

It is not therefore a direct encouragement to the procreation and rearing of children that is wanted in these countries, in order to increase their population; but the creation of an effectual demand for the produce of the soil, by promoting the means of its distribution. This can only be effected either by the introduction of manufactures, and by inspiring the cultivator with a taste for them; or by assisting new colonists and the children of the old cultivators with capital to enable them to occupy

[1] In addition to the causes here mentioned, I have lately been informed that one of the principal reasons why large tracts of rich land lie uncultivated in this part of the world is the swarm of locusts, which at certain seasons covers these districts, and from the ravages of which it is impossible to protect the rising crop.

successively, and bring into cultivation all the land that is fit for it.

The late empress of Russia adopted both these means of increasing the population in her dominions. She encouraged both manufacturers and cultivators; and furnished to foreigners of either description capital free of all interest for a certain term of years.[1] These well-directed efforts, added to what had been done by Peter I. had, as might be expected, a considerable effect; and the Russian territories, particularly the Asiatic part of them, which had slumbered for centuries with a population nearly stationary, or at most increasing very languidly, seem to have made a sudden start of late years. Though the population of the more fertile provinces of Siberia be still very inadequate to the richness of the soil; yet in some of them agriculture flourishes in no inconsiderable degree, and great quantities of corn are grown. In a

[1] Tooke's View of the Russian Empire, vol. ii. p. 242. The principal effect, perhaps, of these importations of foreigners was the introduction of free men instead of slaves and of German industry instead of Russian indolence; but the introduction of that part of capital which consists in machinery would be a very great point, and the cheapness of manufactures would soon give the cultivators a taste for them.

general dearth which happened in 1769, the province of Isetsk was able, notwithstanding a scanty harvest, to supply in the usual manner the foundaries and forges of Ural, beside preserving from the horrors of famine all the neighboring provinces.[1] And in the territory of Krasnoyarsk, on the shores of the Yenissey, in spite of the indolence and drunkenness of the inhabitants, the abundance of corn is so great that no instance has ever been known of a general failure.[2] Pallas justly observes, if we consider that Siberia not two hundred years ago was a wilderness utterly unknown, and in point of population was even far behind the almost desert tracts of North America, we may justly be astonished at the present state of this part of the world, and at the multitude of its Russian inhabitants, who in numbers greatly exceed the natives.[3]

When Pallas was in Siberia, provisions in these fertile districts, particularly in the environs of Krasnoyarsk, were most extraordinarily cheap. A pood, or forty pounds, of wheaten flour, was

[1] Voy. de Pallas, tom. iii. p. 10.
[2] Voy. de Pallas, tom. iv. p. 3.
[3] Id. p. 6.

sold for about two-pence halfpenny, an ox for five or six shillings, and a cow for three or four.[1] This unnatural cheapness, owing to a want of vent for the products of the soil, was perhaps the principal check to the population. In the period which has since elapsed, the prices have risen considerably;[2] and we may conclude, therefore, that the object principally wanted has been attained, and that the population proceeds with rapid strides.

Pallas, however, complains, that the intentions of the empress respecting the peopling of Siberia were not always well fulfilled by her subordinate agents, and that the proprietors to whose care this was left often sent off colonists, in every respect unfit for the purpose, in regard to age, diseases, and want of industrious habits.[3] Even the German settlers in the districts near the Wolga are, according to Pallas, deficient in this last point, and this is certainly a most essential one. It may indeed be safely asserted that the importation of industry is of infinitely more consequence to the

[1] Voy. de Pallas, tom. iii. p. 3.
[2] Tooke's View of the Russian Empire, vol. iii. p. 239
[3] Voy. de Pallas, tom. v. p. 5.
[4] Id. p. 253.

population of a country, than the importation of men and women considered only with regard to numbers. Were it possible at once to change the habits of a whole people, and to direct its industry at pleasure, no government would ever be reduced to the necessity of encouraging foreign settlers. But to change long-existing habits is of all enterprises the most difficult. Many years must elapse under the most favorable circumstances, before the Siberian boor will possess the industry and activity of an English laborer. And though the Russian government has been incessant in its endeavors to convert the pastoral tribes of Siberia to agriculture; yet many obstinately persist in bidding defiance to any attempts that can be made to wean them from their injurious sloth.[1]

Many other obstacles concur to prevent that rapid growth of the Russian colonies which the procreative power would permit. Some of the low countries of Siberia are unhealthy, from the number of marshes which they contain, and great and wasting epizooties are frequent among

[1] Tooke's Russian Empire, vol. iii. p. 313.

[2] Voy. de Pallas, tom. iii. p. 16. Though in countries where the procreative power is never fully called into ac-

Of the checks to population in

the cattle.[1] In the districts near the Wolga, though the soil is naturally rich, yet droughts are so frequent, that there is seldom more than one good harvest out of three.[2] The colonists of Saratof, after they had been settled for some years, were obliged to remove on this account to other districts, and the whole expense of building their houses, amounting to above a million of rubles, was remitted to them by the empress.[3] For purposes either of safety or convenience, the houses of each colony are all built contiguous, or nearly so, and not scattered about upon the different farms. A want of room is in consequence soon felt in the immediate neighborhood of the village, while the distant grounds remain in a state of very imperfect cultivation. On observing this in the colony of Kotschesnaia, Pallas proposed that a certain part should be removed by the empress to other districts, that the remainder might be left more at

tion, unhealthy seasons and epidemics have but little effect on the average population; yet in new colonies which are differently circumstanced in this respect, they materially impede its progress.

[1] Id. p. 17. tom v. p. 411.

[2] Id. p. 252. et seq.

[3] Tooke's Russian Empire, vol. ii. p. 245.

their ease.[1] This proposal seems to prove that spontaneous divisions of this kind did not often take place, and that the children of the colonists might not always find an easy mode of settling themselves, and rearing up fresh families. In the flourishing colony of the Moravian brethren in Sarepta, it is said that the young people cannot marry without the consent of their priests; and that their consent is not in general granted till late.[2] It would appear, therefore, that among the obstacles to the increase of population, even in these new colonies the preventive check has its share. Population can never increase with great rapidity but when the price of common labor is very high, as in America; and from the state of society in this part of the Russian territories, and the consequent want of a proper vent for the produce of industry, this effect, which usually accompanies new colonies, and is essential to their rapid growth, does not take place in any considerable degree.

[1] Voy. de Pallas, tom. v. p. 253.
[2] Id. p. 175.

CHAPTER X.

Of the Checks to Population in the Turkish Dominions and Persia.

IN the Asiatic parts of the Turkish dominions it will not be difficult, from the accounts of travellers, to trace the checks to population and the causes of its present decay; and as there is little difference in the manners of the Turks, whether they inhabit Europe or Asia, it will not be worth while to make them the subject of distinct consideration.

The fundamental cause of the low state of population in Turkey, compared with its extent of territory, is undoubtedly the nature of the government. Its tyranny, its feebleness, its bad laws, and worse administration of them, with the consequent insecurity of property, throw such obstacles in the way of agriculture that the means of subsistence are necessarily decreasing yearly, and with them, of course, the number of people. The miri, or, general land-tax, paid to the sultan is in itself

moderate;[1] but by abuses inherent in the Turkish government, the pachas and their agents have found out the means of rendering it ruinous. Though they cannot absolutely alter the impost which has been established by the sultan, they have introduced a multitude of changes, which without the name produce all the effects of an augmentation.[2] In Syria, according to Volney, having the greatest part of the land at their disposal, they clog their concessions with burthensome conditions, and exact the half, and sometimes even two-thirds of the crop. When the harvest is over, they cavil about losses, and as they have the power in their hands, they carry off what they think proper. If the season fail they still exact the same sum, and expose every thing that the poor peasant possesses to sale. To these constant oppressions are added a thousand accidental extortions. Sometimes a whole village is laid under contribution for some real or imaginary offence. Arbitrary presents are exacted on the accession of each governor; grass, barley, and straw, are demanded for his horses; and commissions are multiplied, that the soldiers who carry the orders may live upon the

[1] Voy. de Volney, tom. ii. c. xxxvii. p. 373. (8vo. 1787.)
[2] Voy. de Volney, tom. ii. c. xxxvii. p. 373. (8vo. 1787.)

starving peasants, whom they treat with the most brutal insolence and injustice.[1]

The consequence of these depredations is that the poorer class of inhabitants, ruined, and unable any longer to pay the miri, become a burden to the village, or fly into the cities; but the miri is unalterable, and the sum to be levied must be found somewhere. The portion of those who are thus driven from their homes falls on the remaining inhabitants, whose burden, though at first light, now becomes insupportable. If they should be visited by two years of drought and famine, the whole village is ruined and abandoned; and the tax which it should have paid is levied on the neighboring lands.[2]

The same mode of proceeding takes place with regard to the tax on the Christians, which has been raised by these means from three, five, and eleven piastres, at which it was first fixed, to thirty-five and forty, which absolutely impoverishes those on whom it is levied, and obliges them to leave the country. It has been remarked that these exactions have made a rapid progress during the last

[1] Voy. de Volney, tom. ii. c. xxxvii.

[2] Id. c. xxxvii. p. 375.

the Turkish dominions and Persia.

forty years, from which time are dated the decline of agriculture, the depopulation of the country, and the diminution in the quantity of specie carried to Constantinople.[1]

The peasants are every where reduced to a little flat cake of barley or dourra, onions, lentils, and water. Not to lose any part of their corn, they leave in it all sorts of wild grain, which often produces bad consequences. In the mountains of Lebanon and Nablous, in time of dearth, they gather the acorns from the oaks, which they eat after boiling or roasting them on the ashes.[2]

By a natural consequence of this misery, the art of cultivation is in the most deplorable state. The husbandman is almost without instruments, and those he has are very bad. His plough is frequently no more than the branch of a tree cut below a fork, and used without wheels. The ground is tilled by asses and cows; rarely by oxen, which would bespeak too much riches. In the districts exposed to the Arabs, as in Palestine, the countryman must sow with his musket in his hand; and scarcely does the corn turn yellow before it is reaped and concealed in sub-

[1] Voy. de Volney, tom. ii. ch. xxxvii. p. 376.

[2] Ibid. p. 377.

terraneous caverns. As little as possible is employed for seed corn, because the peasants sow no more than is barely necessary for their subsistence. Their whole industry is limited to a supply of their immediate wants; and to procure a little bread, a few onions, a blue shirt, and a bit of woollen, much labor is not necessary. "The "peasant lives therefore in distress; but at least "he does not enrich his tyrants, and the avarice "of despotism is its own punishment."[1]

This picture which is drawn by Volney, in describing the state of the peasants in Syria, seems to be confirmed by all the other travellers in these countries; and, according to Eton, it represents very nearly the condition of the peasants in the greatest part of the Turkish dominions.[2] Universally the offices of every denomination are set up to public sale, and in the intrigues of the seraglio, by which the disposal of all places is regulated, every thing is done by means of bribes. The pachas in consequence, who are sent into the provinces, exert to the utmost their power of extortion; but are always outdone by the officers

[1] Voy. de Volney, tom. ii. c. xxxvii. p. 379.
[2] Eton's Turkish Emp. c. viii. 2d edit. 1799.

the Turkish dominions and Persia.

immediately below them, who, in their turn, leave room for their subordinate agents.[1]

The pacha must raise money to pay the tribute and also to indemnify himself for the purchase of his office, support his dignity, and make a provision in case of accidents; and, as all power, both military and civil, centres in his person from his representing the sultan, the means are at his discretion, and the quickest are invariably considered as the best.[2] Uncertain of to-morrow, he treats his province as a mere transient possession, and endeavors to reap, if possible, in one day, the fruit of many years, without the smallest regard to his successor, or the injury that he may do to the permanent revenue.[3]

The cultivator is necessarily more exposed to these extortions than the inhabitants of the towns. From the nature of his employment, he is fixed to one spot, and productions of agriculture do not admit of being easily concealed. The tenure of the land and the right of succession are besides uncertain. When a father dies the inheritance reverts to the sultan, and the chil-

[1] Eton's Turk. Emp. c. ii. p. 53.

[2] Voy. de Volney, tom. ii. c. xxxiii. p. 347.

[3] Id. p. 350.

dren can only redeem the succession by a considerable sum of money. These considerations naturally occasion an indifference to landed estates. The country is deserted, and each person is desirous of flying to the towns, where he will not only in general meet with better treatment, but may hope to acquire a species of wealth which he can more easily conceal from the eyes of his rapacious masters.[1]

To complete the ruin of agriculture, a maximum is in many cases established, and the peasants are obliged to furnish the towns with corn at a fixed price. It is a maxim of Turkish policy, originating in the feebleness of the government and the fear of popular tumults, to keep the price of corn low in all the considerable towns. In the case of a failure in the harvest, every person who possesses any corn is obliged to sell it at the price fixed, under pain of death; and if there be none in the neighborhood, other districts are ransacked for it. When Constantinople is in want of provisions, ten provinces are perhaps famished for a supply.[3] At Damascus, during the scar-

[1] Voyage de Volney, tom. ii. c. xxxvi. p. 369.
[2] Id. c. xxxviii. p. 38.
[3] Id. c. xxxiii. p. 345.

the Turkish dominions and Persia.

city in 1784, the people paid only one penny farthing a pound for their bread, while the peasants in the villages were absolutely dying with hunger.[1]

The effect of such a system of government on agriculture need not be insisted upon. The causes of the decreasing means of subsistence are but too obvious; and the checks which keep the population down to the level of these decreasing resources may be traced with nearly equal certainty; and will appear to include almost every species of vice and misery that is known.

It is observed in general that the Christian families consist of a greater number of children than he Mahometan families where polygamy prevails[2]. This is an extraordinary fact; because though po- gamy, from the unequal distribution of women hich it occasions, be naturally unfavorable to the pulation of a whole country; yet the individuals o are able to support a plurality of wives ought tainly in the natural course of things to have a ater number of children than those who are con- d to one. The way in which Volney princi- accounts for this fact is that, from the pre-

[1] Voy. de Volney, tom. ii. c. xxxviii. p. 381.

[2] Eton's Turkish Emp. c. vii. p. 275.

tice of polygamy, and very early marriages, the Turks are enervated while young, and impotence at thirty is very common. Eton notices an unnatural vice as prevailing in no inconsiderable degree among the common people, and considers it as one of the checks to the population;[2] but the five principal causes of depopulation which he enumerates, are,

1. The plague, from which the empire is never entirely free.

2. Those terrible disorders which almost always follow it, at least in Asia.

3. Epidemic and endemic maladies in Asia which make as dreadful ravages as the plague itself, and which frequently visit that part of the empire.

4. Famine.

5. And lastly, the sicknesses which always follow a famine, and which occasion a much greater mortality.[3]

He afterwards gives a more particular account of the devastations of the plague in different parts of the empire, and concludes by observing, that if

Voy. de Volney, tom. ii. c. xl. p. 445.

[2] Eton's Turkish Emp. c. vii. p. 275.

[3] Id. p. 264.

the Turkish dominions and Persia.

the number of the Mahometans have decreased, this cause alone is adequate to the effect, ; and that things going on in their present train, the Turkish population will be extinct in another century.[2] But this inference, and the calculations which relate to it, are without doubt erroneous. The increase of population in the intervals of these periods of mortality is probably greater than he is aware of. At the same time it must be remarked that in a country where the industry of the husbandman is confined to the supply of his necessary wants, where he sows only to prevent himself from starving, and is unable to accumulate any surplus produce, a great loss of people is not easily recovered, as the natural effects from the diminished numbers cannot be felt in the same degree as in countries where industry prevails, and property is secure.

According to the Persian legislator, Zoroaster, to plant a tree, to cultivate a field, to beget children are meritorious acts; but it appears from the account of travellers, that many among the lower classes of people cannot easily attain the latter species of merit; and in this instance as in num-

[1] Eton's Turkish Emp. c. vii. p. 291.
[2] Id. p. 280.

berless others, the private interest of the individual corrects the errors of the legislator. Sir John Chardin says, that matrimony in Persia is very expensive and that only men of estates will venture upon it, lest it prove their ruin.[1] The Russian travellers seem to confirm this account, and observe that the lower classes of the people are obliged to defer marriage till late; and that it is only among the rich that this union takes place early.[2]

The dreadful convulsions to which Persia has been continually subject for many hundred years must have been fatal to her agriculture. The periods of repose from external wars and internal commotions have been short and few, and even during the times of profound peace, the frontier provinces have been constantly subject to the ravages of the Tartars.

The effect of this state of things is such as might be expected. The proportion of uncultivated to cultivated land in Persia, Sir John Chardin states to be ten to one;[3] and the mode in which the officers of the Shah and private owners let out their

[1] Sir John Chardin's Travels. Harris' Collect. b. iii. c. ii. p. 870.

[2] Découv. Russ. tom. ii. p. 293.

[3] Chardin's Travels. Harris' Collect. b. iii. c. ii. p. 902

lands to husbandmen is not that which is best calculated to reanimate industry. The grain in Persia is besides much subject to be destroyed by hail, droughts, locusts, and other insects,[1] which probably tends rather to discourage the employment of capital in the cultivation of the soil.

The plague does not extend to Persia; but the small-pox is mentioned by the Russian travellers as making very fatal ravages.[2]

It will not be worth while to enter more minutely on the checks to population in Persia, as they seem to be nearly similar to those which have been just described in the Turkish dominions. The superior destruction of the plague, in Turkey, is perhaps nearly balanced by the greater frequency of internal commotions in Persia.

[1] Chardin's Travels. Harris' Collect. b. iii. c. ii. p. 902.
[2] Découv. Russ. tom. ii. p. 377.

CHAPTER XI.

Of the Checks to Population in Indostan and Tibet.

IN the ordinances of Menu, the Indian legislator, which Sir Wm. Jones has translated and called the *Institutes of Hindu Law*, marriage is very greatly encouraged, and a male heir is considered as an object of the first importance.

"By a son a man obtains victory over all peo-
"ple; by a son's son he enjoys immortality; and
"afterwards by the son of that grandson he reach-
"es the solar abode."

"Since the son delivers his father from the
"hell, named Put, he was therefore called puttra,
"by Brahma himself."[1]

Among the different nuptial rites, Menu has ascribed particular qualities to each.

---

[1] Sir Wm. Jones' Works, vol. iii. c. ix. p. 354. Speaking of the Indian laws, the Abbé Raynal says, "La popu-
"lation est un devoir primitif, un ordre de la nature si
"sacré, que la loi permet de tromper, de mentir, de se
"parjurer pour favoriser un marriage." Hist. des Indes, tom. i. l. i. p. 81. 8vo. 10 vols. Paris 1795.

Of the checks to population, &c.

"A son of a *Bráhmí*, or wife by the first cere-
"mony, redeems from sin, if he perform virtuous
"acts, ten ancestors, ten descendants, and himself,
"the twenty-first person."

"A son born of a wife by the *Daiva* nuptials
"redeems seven and seven, in higher and low-
"er degrees; of a wife by the *Arsha*, three and
"three; of a wife by the *Prájápatya*, six and
"six."[1]

A housekeeper is considered as of the most eminent order. "The divine sages, the manes,
"the gods, the spirits, and guests, pray for be-
"nefits to masters of families."[2] An elder brother not married before the younger, is mentioned among the persons who are particularly to be shunned.[3]

Such ordinances would naturally cause marriage to be considered as a religious duty; yet it seems to be rather a succession of male heirs, than a very numerous progeny, that is the object so much desired.

"The father having begotten a son discharges
"his debt to his own progenitors."

[1] Sir Wm. Jones' Works, vol. iii. c. iii. p. 124.
[2] Id. p. 130.
[3] Id. p. 141.

"That son alone by whose birth he discharges "the debt, and through whom he attains immor- "tality was begotten from a sense of duty; all the "rest are considered by the wise as begotten from "love of pleasure."[1]

A widow is on some occasions allowed to have one son by the brother, or some appointed kinsman of the deceased husband, but on no account a second. "The first object of the appointment "being obtained according to law, both the brother "and the sister must live together like a father and "daughter by affinity."[2]

In almost every part of the ordinances of Menu, sensuality of all kinds is strongly reprobated, and chastity inculcated as a religious duty.

"A man by the attachment of his organs to "sensual pleasures incurs certain guilt; but hav- "ing wholly subdued them he thence attains "heavenly bliss."

"Whatever man may obtain all those gratifica- "tions, or whatever man may resign them com- "pletely, the resignation of all pleasures is far bet- "ter than the attainment of them."[3]

---

[1] Sir William Jones' Works, vol. iii. c. ix. p. 340.
[2] Id. p. 343.
[3] Id. c. ii. p. 96.

in Indostan and Tibet.

It is reasonable to suppose that such passages might in some degree, tend to counteract those encouragements to increase which have been before mentioned, and might prompt some religious persons to desist from further indulgences when they had obtained one son, or to remain more contented than they otherwise would have been in an unmarried state. Strict and absolute chastity seems indeed to supercede the obligation of having descendants.

"Many thousands of Brahmens having avoided sensuality from their early youth, and having left no issue in their families, have ascended nevertheless to heaven."

"And like those abstemious men, a virtuous wife ascends to heaven though she have no child, if after the decease of her lord she devote herself to pious austerity."[1]

The permission to a brother or other kinsman to raise up an heir for the deceased husband, which has been noticed, extends only to women of the servile class.[2] Those of the higher classes are

[1] Sir Wm. Jones' Works, vol. iii. c. v. p. 221.

[2] Id. c. iv. p. 218.

not even to pronounce the name of another man, but to

"Continue till death forgiving all injuries, "performing harsh duties, avoiding every sensual "pleasure, and cheerfully practising the incom- "parable rules of virtue."[1]

Beside these strict precepts relating to the government of the passions, other circumstances would perhaps concur to prevent the full effect of the ordinances which encourage marriage.

The division of the people into classes, and the continuance of the same profession in the same family would be the means of pointing out to each individual, in a clear and distinct manner, his future prospects respecting a livelihood; and from the gains of his father he would be easily enabled to judge whether he could support a family by the same employment. And though when a man cannot gain a subsistence in the employments appropriate to his class, it is allowable for him, under certain restrictions, to seek it in another; yet some kind of disgrace seems to attach to this expedient, and it is not probable that many persons would marry with the certain prospect of being obliged

[1] Sir William Jones' Works, vol. iii. c. v. p. 221.

in Indostan and Tibet.

thus to fall from their class, and to lower in so marked a manner their condition in life.

In addition to this, the choice of a wife seems to be a point of considerable difficulty. A man might remain unmarried for some time before he could find exactly such a companion as the legislator prescribes. Ten families of a certain description, be they ever so great, or ever so rich in kine, goats, sheep, gold, and grain, are studiously to be avoided. Girls with too little or too much hair, who are too talkative, who have bad eyes, a disagreeable name, or any kind of sickness, who have no brother, or whose father is not well known, are all, with many others, excluded; and the choice will appear to be in some degree confined when it must necessarily rest upon

"A girl whose form has no defect; who has an "agreeable name; who walks gracefully, like a "phenicopteros, or a young elephant; whose hair "and teeth are moderate respectively in quantity "and size; whose body has exquisite softness."[1]

It is observed that a woman of the servile class is not mentioned, even in the recital of any an-

[1] Sir William Jones' Works, vol. iii. c. iii. p. 120.

cient story, as the wife of a Brahmen or of a Cshatriya, though in the greatest difficulty to find a suitable match; which seems to imply that such a difficulty might sometimes occur.[1]

Another obstacle to marriage arising from the Hindoo custom is, that an elder brother who does not marry seems in a manner to confine all his other brothers to the same state; for a younger brother who marries before the elder incurs disgrace, and is mentioned among the persons who ought to be shunned.[2]

The character which the legislator draws of the manners and disposition of the women in India is most extremely unfavorable. Among many other passages expressed with equal severity, he observes that,

"Through their passion for men, their mutable "temper, their want of settled affection, and their "perverse nature, (let them be guarded in this "world ever so well,) they soon become alienated "from their husbands."[3]

This character, if true, probably proceeded from

[1] Sir Wm. Jones' Works, vol. iii. c. iii. p. 121.
[2] Id. p. 141.
[3] Id. c. ix. p. 337.

their never being allowed the smallest degree of liberty,[1] and from the state of degradation to which they were reduced by the practice of polygamy; but however this may be, such passages tend strongly to show that illicit intercourse between the sexes was frequent notwithstanding the laws against adultery. These laws are noticed as not relating to the wives of public dancers or singers, or of such base men as lived by the intrigues of their wives;[2] a proof that these characters were not uncommon, and were to a certain degree permitted. Add to this, that the practice of polygamy[3] among the rich would sometimes render it difficult for the lower classes of people to obtain wives; and this difficulty would probably fall particularly hard on those who were reduced to the condition of slaves.

From all these circumstances combined, it seems probable that among the checks to population in India the preventive check would have its share; but from the prevailing habits and opinions of the people there is reason to believe, that the

[1] Sir William Jones' Works, vol. iii. c. v. p. 219.

[2] Id. c. viii. p. 325.

[3] Id. c. ix. p. 346, 347.

tendency to early marriages was still always predominant, and in general prompted every person to enter into this state who could look forward to the slightest chance of being able to maintain a family. The natural cousequence of this was, that the lower classes of people were reduced to extreme poverty, and were compelled to adopt the most frugal and scanty mode of subsistence. This frugality was still further increased, and extended in some degree to the higher classes of society, by its being considered as an eminent virtue.[1] The population would thus be pressed hard against the limits of the means of subsistence, and the food of the country would be meted out to the major part of the people in the smallest shares that could support life. In such a state of things every failure in the crops from unfavorable seasons would be felt most severely; and India, as might be expected, has in all ages been subject to the most dreadful famines.

A part of the ordinances of Menu is expressly dedicated to the consideration of times of distress, and instructions are given to the different classes

[1] Sir William Jones' Works, vol. iii. c. iii. p. 133.

respecting their conduct during these periods. Brahmens pining with hunger and want are frequently mentioned;[1] and certain ancient and virtuous characters are described, who had done impure and unlawful acts, but who were considered by the legislator as justified on account of the extremities to which they were reduced.

"Aiígarta dying with hunger, was going to "destroy his own son by selling him for some cattle; "yet he was guilty of no crime, for he only sought "a remedy against famishing."

"Vámadéva, who well new right and wrong, "was by no means rendered impure, though de- "sirous, when oppressed by hunger, of eating the "flesh of dogs."

"Viswámitra too, than whom none knew better "the distinctions between virtue and vice, resolved "when he was perishing with hunger, to eat the "haunch of a dog which he had received from a "*Chandála.*"[2]

If these great and virtuous men of the highest class, whom all persons were under the obligation of assisting, could be reduced to such extremities,

[1] Sir William Jones' Works, vol. iii. c. iv. p. 165. c. x. p. 397.

[2] Id. c. x. p. 397, 398.

we may easily conjecture what must have been the sufferings of the lowest class.

Such passages clearly prove the existence of seasons of the most severe distress, at the early period when these ordinances were composed; and we have reason to think that they have occurred at irregular intervals ever since. One of the Jesuits says that it is impossible for him to describe the misery to which he was witness during the two years famine in 1737 and 1738;[1] but the description which he gives of it, and of the mortality which it occasioned, is sufficiently dreadful without further detail. Another Jesuit speaking more generally, says, "Every year we baptize a thousand chil-"dren whom their parents can no longer feed, or "who, being likely to die, are sold to us by their "mothers in order to get rid of them."[2]

The positive checks to population would of course fall principally upon the Sudrá class, and those still more miserable beings who are the outcasts of all the classes, and are not even suffered to live within the towns.[3]

[1] Lettres Edif. tom. xiv. p. 178.

[2] Lettres Edif. tom. xiv. p. 284.

[3] Sir William Jones' Works, vol. iii. c. x. p. 390.

in Indostan and Tibet.

On this part of the population the epidemics which are the consequences of indigence and bad nourishment, and the mortality among young children, would necessarily make great ravages; and thousands of these unhappy wretches would probably be swept off in a period of scarcity, before any considerable degree of want had reached the middle classes of the society. The Abbé Raynal says, on what authority I know not, that when the crops of rice fail the huts of these poor outcasts are set on fire, and the flying inhabitants shot by the proprietors of the grounds, that they may not consume any part of the produce.[1]

The difficulty of rearing a family even among the middle and higher classes of society, or the fear of sinking from their cast, has driven the people in some parts of India to adopt the most cruel expedients to prevent a numerous offspring. In a tribe on the frontiers of Junapore, a district of the province of Benares, the practice of destroying female infants has been fully substantiated. The mothers were compelled to starve them. The reason that the people gave for this cruel practice

[1] Hist. des Indes, tom. i. liv. i. p. 97. 8vo. 10 vols. Paris. 1795.

was the great expense of procuring suitable matches for their daughters. One village only furnished an exception to this rule, and in this village several old maids were living.

It will naturally occur that the race could not be continued upon this principle; but it appeared that the particular exceptions to the general rule, and the intermarriages with other tribes were sufficient for this purpose. Our East India Company obliged these people to enter into an engagement not to continue this inhuman practice.[1]

On the coast of Malabar the Nayrs do not enter into regular marriages, and the right of inheritance and succession rests in the mother of the brother, or otherwise goes to the sister's son, the father of the child being always considered as uncertain.

Among the Brahmens, when there are more brothers than one, only the elder or eldest of them marries. The brothers who thus maintain celibacy cohabit with Nayr women without marriage in the way of the Nayrs. If the eldest brother has not a son then the next brother marries.

Among the Nayrs, it is the custom for one

[1] Asiatic Researches, vol. iv. p. 354.

Nayr woman to have attached to her two males, or four, or perhaps more.

The lower casts, such as carpenters, iron-smiths, and others, have fallen into the imitation of their superiors, with this difference, that the joint concern in one woman is confined to brothers and male relations by blood, to the end that no alienation may take place in the course of the succession.[1]

Montesquieu takes notice of this custom of the Nayrs on the coast of Malabar, and accounts for it on the supposition that it was adopted in order to weaken the family ties of this cast, that as soldiers they might be more at liberty to follow the calls of their profession; but I should think that it originated more probably in a fear of the poverty arising from a large family, particularly as the custom seems to have been adopted by the other classes.[2]

In Tibet, according to Turner's late account of it, a custom of this kind prevails generally. Without pretending absolutely to determine the question of its origin, Mr. Turner leans to the

[1] Asiatic Researches, vol. v. p. 14.

[2] Esprit des Loix, liv. xvi. c. 5.

supposition that it arose from the fear of a population too great for an unfertile country. From travelling much in the east he had probably been led to observe the effects necessarily resulting from an overflowing population, and is in consequence one among the very few writers who see these effects in their true light. He expresses himself very strongly on this subject, and, in reference to the custom above mentioned, says, " It certainly " appears that a superabundant population in an " unfertile country must be the greatest of all ca- " lamities, and produce eternal warfare or eternal " want. Either the most active and the most " able part of the community must be compelled " to emigrate, and to become soldiers of fortune, " or merchants of chance; or else if they remain " at home be liable to fall a prey to famine in con- " sequence of some accidental failure in their " scanty crops. By thus linking whole families " together in the matrimonial yoke, the too rapid " increase of population was perhaps checked, and " an alarm prevented capable of pervading the " most fertile region upon the earth, and of giving " birth to the most inhuman and unnatural prac- " tice, in the richest, the most productive, and the " most populous country in the world. I allude

"to the empire of China, where a mother not "foreseeing the means of raising or providing for "a numerous family, exposes her new-born infant "to perish in the fields; a crime, however odious, "by no means I am assured unfrequent."[1]

In almost every country of the globe individuals are impelled by considerations of private interest to habits which tend to repress the natural increase of population; but Tibet is perhaps the only country where these habits are universally encouraged by the government, and where to repress rather than to encourage population seems to be a public object.

In the first career of life the Bootea is recommended to distinction by a continuance in a state of celibacy, as on the contrary any matrimonial contract proves almost a certain hindrance to his rise in rank, or his advancement to offices of political importance. Population is thus opposed by the two powerful bars of ambition and religion; and the higher orders of men, entirely engrossed by political or ecclesiastical duties, leave to the husbandman and laborer, to those who till the

[1] Turner's Embassy to Tibet, part ii. c. x. p. 351.

fields and live by their industry, the exclusive charge of propagating the species.[1]

Hence religious retirement is frequent,[2] and the number of monasteries and nunneries is considerable. The strictest laws exist to prevent a woman from accidentally passing a night within the limits of the one, or a man within those of the other; and a regulation is framed completely to obviate abuse, and establish respect towards the sacred orders of both sexes.

The nation is divided into two distinct and separate classes, those who carry on the business of the world, and those who hold intercourse with heaven. No interference of the laity ever interrupts the regulated duties of the clergy. The latter, by mutual compact, take charge of all spiritual concerns; and the former by their labors enrich and populate the state.[3]

But even among the laity the business of population goes on very coldly. All the brothers of a family without any restriction of age or of numbers associate their fortunes with one female who is chosen by the eldest, and considered as the

[1] Turner's Embassy, part ii. c. i. p. 172.

[2] Ibid.

[3] Turner's Embassy, part ii. c. viii. p. 312.

mistress of the house; and whatever may be the profits of their several pursuits, the result flows into the common store.[1]

The number of husbands is not apparently defined or restricted within any limits. It sometimes happens that in a small family there is but one male; and the number, Mr. Turner says, may seldom exceed that which a native of rank at Teshoo Loomboo pointed out to him in a family resident in the neighborhood, in which five brothers were then living together very happily with one female under the same connubial compact. Nor is this sort of league confined to the lower ranks of people alone, is is found also frequently in the most opulent families.[2]

It is evident that this custom, combined with the celibacy of such a numerous body of ecclesiastics, must operate in the most powerful manner as a preventive check to population. Yet notwithstanding this excessive check, it would appear from Mr. Turner's account of the natural sterility of the soil, that the population is kept up to the level of the means of subsistence, and this seems to be confirmed by the number of beggars in Te-

[1] Turner's Embassy, part ii. c. x. p. 348, 350.

[2] Id. p. 349.

shoo Loomboo. On these beggars, and the charity which feeds them, Mr. Turner's remark, though common, is yet so just and important that it cannot be too often repeated.

"Thus I unexpectedly discoverd," he says, "where I had constantly seen the round of life "moving in a tranquil regular routine, a mass of "indigence and idleness of which I had no idea. "But yet it by no means surprised me, when I "considered that wherever indiscriminate charity "exists it will never want objects on which to "exercise its bounty, but will always attract ex- "pectants more numerous than it has the means "to gratify. No human being can suffer want at "Teshoo Loomboo. It is on this humane dis- "position that a multitude even of Musselmen, "of a frame probably the largest and most robust "in the world, place their reliance for the mere "maintenance of a feeble life; and besides these, "I am informed that no less than three hundred "Hindoos, Goseins, and Sunniasses, are daily fed "at this place by the Lama's bounty."[1]

[1] Turner's Embassy, part ii. c. ix. p. 330.

CHAPTER XII.

Of the Checks to Population in China and Japan.

THE account which has lately been given of the population of China is so extraordinary as to startle the faith of many readers, and tempt them to suppose either that some accidental error must have crept into the calculations from an ignorance of the language or that the mandarin who gave Sir George Staunton the information must have been prompted by a national pride which is common every where, but is particularly remarkable in China, to exaggerate the power and resources of his country. It must be allowed that neither of these circumstances is very improbable; at the same time it will be found that the statement of Sir George Staunton does not very essentially differ from other accounts of good authority; and so far from involving any contradiction is rendered probable, by a reference to those descriptions of the fertility of China in which all the writers who have visited the country agree.

According to Duhalde, in the poll made at the

beginning of the reign of Kang-hi, there were found 11,052,872 families, and 59,788,364 men able to bear arms; and yet neither the princes, nor the officers of the court, nor the mandarins, nor the soldiers who had served and been discharged; nor the literati, the licentiates, the doctors, the bonzas, nor young persons under twenty years of age; nor the great multitudes living either on the sea or on rivers in barks, are comprehended in this number.[1]

The proportion which the number of men of a military age bears to the whole population of any country is generally estimated as 1 to 4. If we multiply 59,788,364 by 4, the result will be 239,153,456; but in the general calculations on this subject, a youth is considered as capable of bearing arms before he is twenty. We ought therefore to have multiplied by a higher number. The exceptions to the poll seem to include almost all the superior classes of society, and a very great number among the lower. When all these circumstances are taken into consideration, the whole population, according to Duhalde, will not appear

[1] Duhalde's Hist. of China. 2 vols. folio, 1738. vol. i p. 244.

to fall very short of the 333,000,000 mentioned by Sir George Staunton.

The small number of families, in proportion to the number of persons able to bear arms, which is a striking part of this statement of Duhalde, is accounted for by a custom noticed by Sir George Staunton as general in China. In the inclosure belonging to one dwelling, he observes that a whole family of three generations, with all their respective wives and children, will frequently be found. One small room is made to serve for the individuals of each family, sleeping in different beds, divided only by mats hanging from the ceiling. One common room is used for eating.[1] In China here is besides a prodigious number of slaves, who will of course be reckoned as part of the families to which they belong. These two circumstances may perhaps be sufficient to account for what at first appears to be a contradiction in the statement.

To account for this population, it will not be necessary to recur to the supposition of Montes-

[1] Embassy to China, vol. ii. Appen. p. 615. 4to.
[2] Id. p. 155.
[3] Duhalde's China, vol. i. p. 278.

quieu, that the climate of China is in any peculiar manner favorable to the production of children, and that the women are more prolific than in any other part of the world.[1] The causes which have principally contributed to produce this effect, appear to be the following:

First, the excellence of the natural soil, and its advantageous position in the warmest parts of the temperate zone, a situation the most favorable to the productions of the earth. Duhalde has a long chapter on the plenty which reigns in China, in which he observes, that almost all that other kingdoms afford may be found in China; but that China produces an infinite number of things which are to be found no where else. This plenty, he says, may be attributed as well to the depth of the soil as to the painful industry of its inhabitants, and the great number of lakes, rivers, brooks, and canals, wherewith the country is watered.[2]

Secondly, The very great encouragement that from the beginning of the monarchy has been given to agriculture, which has directed the labors of the people to the production of the greatest

[1] Esprit des Loix, liv. viii. c. xxi.

[2] Duhalde's China, vol. i. p. 314

possible quantity of human subsistence. Duhalde says, that what makes these people undergo such incredible fatigues in cultivating the earth is not barely their private interest, but rather the veneration paid to agriculture, and the esteem which the emperors themselves have always had for it, from the commencement of the monarchy. One emperor of the highest reputation was taken from the plough to sit on the throne. Another found out the art of draining water from several low countries, which were till then covered with it, of conveying it in canals to the sea, and of using these canals to render the soil fruitful.[1] He besides wrote several books on the manner of cultivating land, by dunging, tilling, and watering it. Many other emperors expressed their zeal for this art, and made laws to promote it; but none raised its esteem to a higher pitch than Ven-ti, who reigned 179 years before Christ. This prince perceiving that his country was ruined by wars, resolved to engage his subjects to cultivate their lands, by the example of ploughing with his own hands the land belonging to his palace, which

[1] Duhalde's China, vol. i. p. 274.

obliged all the ministers and great men of his court to do the same.[1]

A great festival, of which this is thought to be the origin, is solemnised every year in all the cities of China on the day that the sun enters the fifteenth degree of Aquarius, which the Chinese consider as the beginning of their spring. The emperor goes himself in a solemn manner to plough a few ridges of land, in order to animate the husbandman by his own example; and the mandarins of every city perform the same ceremony.[2] Princes of the blood and other illustrious persons hold the plough after the emperor, and the ceremony is preceded by the spring sacrifice, which the emperor as chief pontiff offers to Shang-ti to procure plenty in favor of his people.

The reigning emperor in the time of Duhalde, celebrated this festival with extraordinary solemnity, and in other respects showed an uncommon regard for husbandmen. To encourage them in their labors, he ordered the governors of all the cities to send him notice every year of the person in this profession, in their respective districts,

[1] Duhalde's China, vol. i. p. 275.
[2] Id. p. 275.

who was most remarkable for his application to agriculture, for unblemished reputation, for preserving union in his own family, and peace with his neighbors, and for his frugality and aversion to all extravagance.[1] The mandarins in their different provinces encourage with honors the vigilant cultivator, and stigmatize with disgrace the man whose lands are neglected.

In a country in which the whole of the government is of the patriarchal kind, and the emperor is venerated as the father of his people and the fountain of instruction, it is natural to suppose that these high honors paid to agriculture would have a powerful effect. In the gradations of rank, they have raised the husbandman above the merchant or mechanic,[3] and the great object of ambition among the lower classes is in consequence to become possessed of a small portion of land. The number of manufacturers bears but a very inconsiderable proportion to that of husbandmen in China;[4] and the whole surface of the empire is, with trifling exceptions, dedicated to the production

[1] Duhalde's China, vol. i. p. 276.
[2] Lettres Edif. tom. xix. p. 132.
[3] Duhalde's China, vol. i. p. 272.
[4] Embassy to China, Staunton, vol. ii. p. 544.

of food for man alone. There is no meadow and very little pasture; neither are the fields cultivated in oats, beans, or turnips, for the support of cattle of any kind. Little land is taken up for roads, which are few and narrow, the chief communication being by water. There are no commons or lands suffered to lie waste by the neglect or the caprice, or for the sport of great proprietors. No arable land lies fallow. The soil under a hot and fertilizing sun yields annually in most instances double crops, in consequence of adapting the culture to the soil, and of supplying its defects by mixture with other earths, by manure, by irrigation, and by careful and judicious industry of every kind. The labor of man is little diverted from that industry to minister to the luxuries of the opulent and powerful, or in employments of no real use. Even the soldiers of the Chinese army, except during the short intervals of the guards which they are called upon to mount, or the exercises or other occasional services which they perform, are mostly employed in agriculture. The quantity of subsistence is increased also by converting more species of animals and vegetables to that purpose, than is usual in other countries. [1]

[1] Embassy to China, Staunton, vol. ii. p. 545.

in China and Japan.

This account which is given by Sir George Staunton, is confirmed by Duhalde and the other Jesuits, who agree in describing the persevering industry of the Chinese, in manuring, cultivating, and watering their lands, and their success in producing a prodigious quantity of human subsistence.[1] The effect of such a system of agriculture on population must be obvious.

Lastly, The extraordinary encouragements that have been given to marriage, which have caused the immense produce of the country to be divided into very small shares, and have consequently rendered China more populous in proportion to its means of subsistence, than perhaps any other country in the world.

The Chinese acknowledge two ends in marriage,[2] the first is, that of perpetuating the sacrifices in the temple of their fathers; and the second, the multiplication of the species. Duhalde says, that the veneration and submission of children to parents, which is the grand principle of their political government, continues even after death, and that the same duties are paid to them

[1] Duhalde, chapter on agriculture, vol. i. p. 272; chapter on plenty, p. 314.

[2] Lettres Edif. et Curieuses, tom. xxiii. p. 448

as if they were living. In consequence of these maxims, a father feels some sort of dishonor, and is not easy in his mind, if he do not marry off all his children; and an elder brother, though he inherit nothing from his father, must bring up the younger children and marry them, lest the family should become extinct, and the ancestors be deprived of the honors and duties they are entitled to from their descendants.[1]

Sir George Staunton observes, that whatever is strongly recommended and generally practised is at length considered as a kind of religious duty, and that the marriage union as such takes place in China wherever there is the least prospect of subsistence for a future family. This prospect however is not always realized, and the children are then abandoned by the wretched authors of their being;[2] but even this permission given to parents thus to expose their offspring tends undoubtedly to facilitate marriage, and encourage population. Contemplating this extreme resource beforehand, less fears are entertained of entering into the married state, and the parental feelings will always step

[1] Duhalde's China, vol. i. p. 303.

[2] Embassy to China, vol. ii. p. 157.

forwards to prevent a recurrence to it, except under the most dire necessity. Marriage with the poor is besides a measure of prudence, because the children, particularly the sons, are bound to maintain their parents.[1]

The effect of these encouragements to marriage among the rich is to subdivide property, which has in itself a strong tendency to promote population. In China there is less inequality in the fortunes than in the conditions of men. Property in land has been divided into very moderate parcels, by the successive distribution of the possessions of every father equally among his sons. It would rarely happen that there was but one son to enjoy the whole property of his deceased parents; and from the general prevalence of early marriages, this property would not often be increased by collateral succession.[2] These causes constantly tend to level wealth, and few succeed to such an accumulation of it, as to render them independent of any efforts of their own for its increase. It is a common remark among the Chinese, that fortunes

[1] Embassy to China, vol. ii. p. 157.

[2] Embassy to China, Staunton, vol. ii. p. 151.

seldom continue considerable in the same family beyond the third generation.[1]

The effect of the encouragements to marriage on the poor is to keep the reward of labor as low as possible, and consequently to press them down to the most abject state of poverty. Sir George Staunton observes, that the price of labor is generally found to bear as small a proportion every where to the rate demanded for provisions as the common people can suffer; and that notwithstanding the advantage of living together in large families, like soldiers in a mess, and the exercise of the greatest economy in the management of these messes, they are reduced to the use of vegetable food, with a very rare and scanty relish of any animal substance.[2]

Duhalde, after describing the painful industry of the Chinese, and the shifts and contrivances unknown in other countries, to which they have recourse in order to gain a subsistence, says, "yet it must be owned that notwithstanding "the great sobriety and industry of the inhabi- "tants of China, the prodigious number of them

[1] Embassy to China, Staunton, vol. ii. p. 152.
[2] Id. p. 156.

in China and Japan.

" occasions a great deal of misery. There are " some so poor, that being unable to supply their " children with common necessaries, they expose " them in the streets." **** " In the great cities, " such as Pekin and Canton, this shocking sight " is very common."[1]

The Jesuit Premare, writing to a friend of the same society, says, " I will tell you a fact, which " may appear to be a paradox,[2] but is nevertheless " strictly true. It is that the richest and most " flourishing empire of the world is notwithstand- " ing, in one sense, the poorest and the most mise- " rable of all. The country, however extensive " and fertile it may be, is not sufficient to support " its inhabitants. Four times as much territory " would be necessary to place them at their ease. " In Canton alone, there is, without exaggeration, " more than a million of souls, and in a town three " or four leagues distant, a still greater number. " Who then can count the inhabitants of this pro- " vince? But what is this to the whole empire " which contains fifteen great provinces all equal- " ly peopled. To how many millions would such

[1] Duhalde's China, vol. i. p. 277.

[2] Lettres Edif. et Curieuses, tom. xvi. p. 394.

" a calculation amount. A third part of this infi-
" nite population would hardly find sufficient rice
" to support itself properly.

" It is well known that extreme misery im-
" pels people to the most dreadful excesses. A
" spectator in China who examines things closely
" will not be surprised, that mothers destroy or
" expose many of their children; that parents sell
" their daughters for a trifle; that the people
" should be interested; and that there should be
" such a number of robbers. The surprise is,
" that nothing still more dreadful should happen,
" and that in the times of famines, which are here
" but too frequent, millions of people should perish
" with hunger, without having recourse to those
" dreadful extremities, of which we read exam-
" ples in the histories of Europe.

" It cannot be said in China as in Europe, that
" the poor are idle, and might gain a subsistence
" if they would work. The labors and efforts of
" these poor people are beyond conception. A
" Chinese will pass whole days in digging the earth,
" sometimes up to his knees in water, and in the
" evening is happy to eat a little spoonful of rice,
" and to drink the insipid water in which it was

in China and Japan.

" boiled. This is all that they have in general."

A great part of this account is repeated in Duhalde, and even allowing for some exaggeration, it shows in a strong point of view, to what degree population has been forced in China, and the wretchedness which has been the consequence of it. The population which has arisen naturally from the fertility of the soil, and the encouragements to agriculture may be considered as genuine and desirable; but all that has been added by the encouragements to marriage has not only been an addition of so much pure misery in itself, but has completely interrupted the happiness which the rest might have enjoyed.

The territory of China is estimated at about eight times the territory of France.[2] Taking the population of France only at 26 millions, eight times that number will give 208,000,000; and when the three powerful causes of population, which have been stated are considered, it will not appear incredible that the population of China should be to the population of France, according to their respective superfices, as 333 to 208, or a little more than 3 to 2.

[1] Lettres Edif. et Curieuses, tom. xvi. p. 394, et seq.

[2] Embassy to China, Staunton, vol. ii. p. 546.

Of the checks to population

The natural tendency to increase is every where so great, that it will generally be easy to account for the height at which the population is found in any country. The more difficult as well as the more interesting part of the inquiry is to trace the immediate causes which stop its further progress. The procreative power would, with as much facility, double in twenty-five years, the population of China, as that of any of the states of America; but we know that it cannot do this, from the palpable inability of the soil to support such an additional number. What then becomes of this mighty power in China? And what are the kinds of restraint, and the forms of premature death, which keep the population down to the level of the means of subsistence?

Notwithstanding the extraordinary encouragements to marriage in China, we should perhaps be led into an error if we were to suppose that the preventive check to population does not operate. Duhalde says, that the number of bonzas is considerably above a million, of which there are two thousand unmarried at Pekin, beside three hundred and fifty thousand more in their temples established in different places by the emperor's p[illegible]

tents, and that the literary bachelors alone are about ninety thousand.[1]

The poor though they would probably always marry when the slightest prospect opened to them of being able to support a family, and, from the permission of infanticide, would run great risks in this respect; yet they would undoubtedly be deterred from entering into this state under the certainty of being obliged to expose all their children, or to sell themselves and families as slaves; and from the extreme poverty of the lower classes of people, such a certainty would often present itself. But it is among the slaves themselves, of which, according to Duhalde, the misery in China produces a prodigious multitude, that the preventive check to population principally operates. A man sometimes sells his son, and even himself and wife, at a very moderate price. The common mode is, to mortgage themselves with a condition of redemption, and a great number of men and maid servants are thus bound in a family.[2] Hume, in

[1] Duhalde's China, vol. i. p. 244.

[2] Id. p. 278. La misère et le grand nombre d'ha[illegible] de l'empire y causent cette multitude prodigeus[illegible] claves: presque tous les valets, et généralement toutes les filles de service d'une maison sont esclaves. Lettres Edif. tom. xix. p. 145.

speaking of the practice of slavery among the ancients, remarks very justly, that it will generally be cheaper to buy a full grown slave than to rear up one from a child. This observation appears to be particularly applicable to the Chinese. All writers agree in mentioning the frequency of the dearths in China, and, during these periods, it is probable that slaves would be sold in great numbers for little more than a bare maintenance. It could very rarely therefore answer to the master of a family to encourage his slaves to breed; and we may suppose in consequence, that a great part of the servants in China as in Europe remain unmarried.

The check to population arising from a vicious intercourse with the sex does not appear to be very considerable in China. The women are said to be modest and reserved, and adultery is rare. Concubinage is however generally practised, and in the large towns public women are registered; but their number is not great, being proportioned, according to Sir George Staunton, to the small number of unmarried persons, and of [redacted]nds absent from their families.[1]

[1] Embassy to China, vol. ii. p. 157.

in China and Japan.

The positive checks to population from disease, though considerable, do not appear to be so great as might be expected. The climate is in general extremely healthy. One of the missionaries goes so far as to say, that plagues or epidemic disorders are not seen once in a century;[1] but this is undoubtedly an error, as they are mentioned by others as if they were by no means so infrequent. In some instructions to mandarins relating to the burying of the poor, who have in general no regular places of sepulture, it is observed that when epidemic diseases prevail, the roads are found covered with bodies sufficient to infect the air to a great distance;[2] and the expression of years of contagion[3] occurs soon after, in a manner which seems to imply that they are not uncommon. On the first and fifteenth day of every month the mandarins assemble, and give their people a long discourse, wherein every governor acts the part of a father who instructs his family.[4] In one of these discourses

[1] Lettres Edif. tom. xxii. p. 187.
[2] Lettres Edif. tom. xix. p. 126.
[3] Id. p. 127.
[4] Duhalde's China, vol. i. p. 254.

which Duhalde produces, the following passage occurs: "Beware of those years which happen "from time to time, when epidemic distempers, "joined to a scarcity of corn, make all places "desolate. Your duty is then to have compassion "on your fellow citizens, and assist them with "whatever you can spare."[1]

It is probable that the epedemics, as is usually the case, fall severely on the children. One of the Jesuits, speaking of the number of infants whom the poverty of their parents condemns to death the moment that they are born, writes thus: "There is seldom a year in which the churches "at Pekin do not reckon five or six thousand "of these children purified by the waters of "baptism. This harvest is more or less abun-"dant according to the number of catechists which "we can maintain. If we had a sufficient num-"ber, their cares need not be confined alone to the "dying infants that are exposed. There would be "other occasions for them to exercise their zeal, "particularly at certain times of the year, when "the small-pox or epidemic disorders carry off an

[1] Duhalde's China, vol. i. p. 256

in China and Japan.

"incredible number of children."[1] It is indeed almost impossible to suppose, that the extreme indigence of the lower classes of people should not produce diseases that would be fatal to a considerable part of those children, whom their parents might attempt to rear in spite of every difficulty.

Respecting the number of infants which are actually exposed, it would be difficult to form the slightest guess; but, if we believe the Chinese writers themselves, the practice must be very common. Attempts have been made at different times by the government to put a stop to it, but always without success. In a book of instructions before alluded to, written by a mandarin celebrated for his humanity and wisdom, a proposal is made for the establishment of a foundling hospital in his district, and an account is given of some ancient establishments of the same kind,[2] which appear to have fallen into disuse. In this book the frequency of the exposure of children, and the dreadful poverty which prompts it, are particularly described. "We see," he says, "people so poor that they cannot furnish the nourishment necessary for their own children. It is on this account

[1] Lettres Edif. tom. xix. p. 100.

[2] Id. p. 110.

that they expose so great a number. In the metropolis, in the capitals of the provinces, and in the places of the greatest commerce, their number is the most considerable; but many are found in parts that are less frequented, and even in the country. As the houses in towns are more crowded together, the practice is more obvious; but every where these poor unfortunate infants have need of assistance."[1]

In the same work part of an edict to prevent the drowning of children runs thus: "When "the tender offspring just produced is thrown "without pity into the waves, can it be said that the "mother has given or that the child has received "life, when it is lost as soon as it is begun to be "enjoyed? The poverty of the parents is the "cause of this crime. They have hardly enough "to support themselves, much less are they able "to pay a nurse and provide for the expenses ne-"cessary for the support of their children. This "drives them to despair, and not being able to "bring themselves to suffer two people to die that "one may live, the mother, to preserve the life of

[1] Lettres Edif. tom. xix. p. 111.

in China and Japan.

" her husband, consents to sacrifice her child. It " costs much, however, to the parental feelings, " but the resolution is ultimately taken, and they " think that they are justified in disposing of the " life of their child to prolong their own. If they " exposed their children in a secret place, the " babe might work upon their compassion with " its cries. What do they do then? They throw " it into the current of the river, that they may " lose sight of it immediately, and take from it at " once all chance of life."[1]

Such writings appear to be most authentic documents respecting the general prevalence of infanticide.

Sir George Staunton has stated from the best information which he could collect, that the number of children exposed annually at Pekin is about two thousand;[2] but it is highly probable that the number varies extremely from year to year, and depends very much upon seasons of plenty or seasons of scarcity. After any great epidemic or destructive famine, the number is probably very small; it is natural that it should in-

[1] Lettres Edif. tom. xix. p. 124.
[2] Embassy to China, vol. ii. p. 159.

crease gradually on the return to a crowded population, and is without doubt the greatest when an unfavorable season takes place, at a period in which the average produce is already insufficient to support the overflowing multitude.

These unfavorable seasons do not appear to be infrequent, and the famines which follow them are perhaps the most powerful of all the positive checks to the Chinese population; though at some periods the checks from wars and internal commotions have not been inconsiderable.[1] In the annals of the Chinese monarchs, famines are often mentioned;[2] and it is not probable that they would find a place among the most important events and revolutions of the empire, if they were not desolating and destructive to a great degree.

One of the Jesuits remarks, that the occasions when the mandarins pretend to show the greatest compassion for the people are when they are apprehensive of a failure in the crops, either from drought, from excessive rains, or from some other accident, such as a multitude of locusts, which

[1] Annals of the Chinese Monarchs. Duhalde's China, vol. i. p. 136.

[2] Ibid.

in China and Japan.

sometimes overwhelms certain provinces.[1] The causes here enumerated are probably those which principally contribute to the failure of the harvests in China; and the manner in which they are mentioned seems to show that they are not uncommon.

Meares speaks of violent hurricanes, by which whole harvests are dissipated, and a famine follows. From a similar cause, he says, accompanied by excessive drought, a most dreadful dearth prevailed in 1787 throughout all the southern provinces of China, by which an incredible number of people perished. It was no uncommon thing at Canton to see the famished wretch breathing his last, while mothers thought it a duty to destroy their infant children, and the young to give the stroke of fate to the aged to save them from the agonies of such a dilatory death.[2]

The Jesuit Parennin, writing to a member of the Royal Academy of Sciences, says, "another "thing that you can scarcely believe is, that "dearths should be so frequent in China;"[3] and in the conclusion of his letter he remarks, that if fa-

[1] Lettres Edif. tom. xix. p. 154.
[2] Meares's Voyage, ch. vii. p. 92.
[3] Lettres Edif. et Curieuses, tom. xxii. p. 174.

mine did not from time to time thin the immense number of inhabitants which China contains, it would be impossible for her to live in peace.[1] The causes of these frequent famines he endeavors to investigate, and begins by observing very justly, that in a time of dearth China can obtain no assistance from her neighbors, and must necessarily draw the whole of her resources from her own provinces.[2] He then describes the delays and artifices which often defeat the emperor's intentions to assist from the public granaries those parts of the country which are the most distressed. When a harvest fails in any province, either from excessive drought or a sudden inundation, the great mandarins have recourse to the public granaries; but often find them empty, owing to the dishonesty of the inferior mandarins, who have the charge of them. Examinations and researches are then made, and an unwillingness prevails to inform the court of such disagreeable intelligence. Memorials are however at length presented. These memorials pass through many hands, and do not reach the emperor till after many days. The great officers

[1] Lettres Edif. et curieuses, tom. xxii. p. 186.
[2] Id. p. 175.

of the state are then ordered to assemble, and to deliberate on the means of relieving the misery of the people. Declarations full of expressions of compassion for the people are in the mean time published throughout the empire. The resolution of the tribunal is at length made known; but numberless other ceremonies delay its execution; while those who are suffering have time to die with hunger before the remedy arrives. Those who do not wait for this last extremity crawl as well as they can into other districts, where they hope to get support, but leave the greatest part of their number dead on the road.[1]

If when a dearth occurs the court do not make some attempt to relieve the people, small parties of plunderers soon collect, and their numbers increase by degrees, so as to interrupt the tranquillity of the province. On this account numerous orders are always given, and movements are continually taking place to amuse the people till the famine is over; and as the motives to relieve the people, are generally rather reasons of state than genuine compassion, it is not probable that they should

[1] Lettres Edif. tom. xxii. p. 180.

oe relieved at the time, and in the manner that their wants require.[1]

The last cause of famine which is mentioned in this investigation, and on which the writer lays considerable stress, is, the very great consumption of grain in making spirits; but in stating this as a cause of famine, he has evidently fallen into a very gross error; yet in the Abbé Grosier's general description of China, this error has been copied, and the cause above mentioned has been considered as one of the grand sources of the evil[3] But, in reality the whole tendency of this cause is in a contrary direction. The consumption of corn in any other way but that of necessary food checks the population before it arrives at the utmost limits of subsistence; and as the grain may be withdrawn from this particular use in the time of a scarcity, a public granary is thus opened, richer probably than could have been formed by any other means. When such a consumption has been once established, and has become permanent, its effect is exactly as if a piece of land with all the people upon it were removed from

[1] Lettres Edif. tom. xxii. p. 187.

[2] Id. p. 184.

[3] Vol. i. b. iv. c. iii. p. 396, 8vo Eng. tran.

the country. The rest of the people would certainly be precisely in the same state as they were before, neither better or worse in years of average plenty; but in a time of dearth the produce of this land would be returned to them, without the mouths to help them to eat it. China, without her distilleries, would certainly be more populous, but on a failure of the seasons would have still less resource than she has at present, and as far as the magnitude of the cause would operate, would in consequence be more subject to famines, and those famines would be more severe.

The state of Japan resembles in so many respects that of China, that a particular consideration of it would lead into too many repetitions. Montesquieu attributes its populousness to the birth of a greater number of females; but the principal cause of this populousness is, without doubt, as in China, the persevering industry of the natives, directed, as it has always been, principally to agriculture.

In reading the preface to Thunberg's account

[1] Liv. xxiii. c. xii. It is surprising that Montesquieu who appears sometimes to understand the subject of population, should at other times make such observations as this.

of Japan, it would seem extremely difficult to trace the checks to the population of a country, the inhabitants of which are said to live in such happiness and plenty: but the continuation of his own work contradicts the impression of his preface; and in the valuable history of Japan by Kæmpfer these checks are sufficiently obvious. In the extracts from two historical chronicles published in Japan, which he produces, a very curious account is given of the different mortalities, plagues, famines, bloody wars, and other causes of destruction which have occurred since the commencement of these records. The Japanese are distinguished from the Chinese, in being much more warlike, seditious, dissolute, and ambitious; and it would appear, from Kæmpfer's account, that the check to population from infanticide, in China, is balanced by the greater dissoluteness of manners with regard to the sex, and the greater frequency of wars and intestine commotions, which prevail in Japan. With regard to the positive checks to population from disease and famine, the two countries seem to be nearly on a level.

[1] Book ii.

CHAPTER XIII.

Of the Checks to Population among the Greeks.

IT has been generally allowed, and will not indeed admit of a doubt, that the more equal division of property among the Greeks and Romans, in the early period of their history, and the direction of their industry principally to agriculture, must have tended greatly to encourage population. Agriculture is not only, as Hume states,[1] that species of industry, which is chiefly requisite to the subsistence of multitudes, but it is in fact the *sole* species by which multitudes can exist; and all the numerous arts and manufactures of the modern world, by which such numbers appear to be supported, have no tendency whatever to increase population, except as far as they tend to increase the quantity, and to facilitate the distribution of the products of agriculture.

In countries where from the operation of particular causes, property in land is divided into very large shares, these arts and manufactures are ab-

[1] Essay xi. p. 467. 4to edit.

solutely necessary to the existence of any considerable population. Without them modern Europe would be unpeopled. But where property is divided into small shares, the same necessity for them does not appear. The division itself attains immediately one great object, that of distribution; and if the demand for men be constant, to fight the battles and support the power and dignity of the state, we may easily conceive that this motive, joined to the natural love of a family, might be sufficient to induce each proprietor to cultivate his land to the utmost, in order that it might support the greatest number of descendants.

The division of people into small states, during the early periods of Greek and Roman history, gave additional force to this motive. Where the number of free citizens did not perhaps exceed ten or twenty thousand, each individual would naturally feel the value of his own exertions, and knowing that the state to which he belonged, situated in the midst of envious and watchful rivals, must depend chiefly on its population for its means of defence and safety, would be sensible that in suffering the lands which were allotted to him to lie idle, he would be deficient in his duty as a citizen. These causes appear to have

among the Greeks.

produced a considerable attention to agriculture without the intervention of the artificial wants of mankind to encourage it. Population followed the products of the earth with more than equal pace; and when the overflowing numbers were not taken off by the drains of war or disease, they found vent in frequent and repeated colonization. The necessity of these frequent colonizations, joined to the smallness of the states, which brought the subject immediately home to every thinking person, could not fail to point out to the legislators and philosophers of those times the strong tendency of population to increase beyond the means of subsistence; and they did not, like the statesmen and projectors of modern days, overlook the consideration of a question which so deeply affects the happiness and tranquillity of society. However we may justly execrate the barbarous expedients which they adopted to remove the difficulty, we cannot but give them some credit for their penetration in seeing it; and in being fully aware, that, if not considered and obviated, it would be sufficient of itself to destroy their best planned schemes of republican equality and happiness.

The power of colonization is necessarily li-

mited, and after the lapse of some time it might be extremely difficult, if not impossible, for a country not particularly well situated for this purpose, to find a vacant spot proper for the settlement of its expatriated citizens. It was necessary therefore to consider of other resources beside colonization.

It is probable that the practice of infanticide had prevailed from the earliest ages in Greece. In the parts of America where it was found to exist, it appears to have originated from the extreme difficulty of rearing many children in a savage and wandering life, exposed to frequent famines and perpetual wars. We may easily conceive that it had a similar origin among the ancestors of the Greeks, or the native inhabitants of the country. And when Solon permitted the exposing of children, it is probable that he only gave the sanction of law to a custom already prevalent.

In this permission he had, without doubt, two ends in view. First, that which is most obvious, the prevention of such an excessive population as would cause universal poverty and discontent; and, secondly, that of keeping the population up to the level of what the territory could support, by removing the terrors of too numerous a family,

among the Greeks.

and consequently the principal obstacle to marriage. From the effect of this practice in China we have reason to think, that it is better calculated to attain the latter than the former purpose. But if the legislator either did not see this, or if the barbarous habits of the times prompted parents invariably to prefer the murder of their children to poverty, the practice would appear to be very particularly calculated to answer both the ends in view, and to preserve as completely and as constantly as the nature of the thing would permit, the requisite proportion between the food and the numbers which were to consume it.

On the very great importance of attending to this proportion, and the evils that must necessarily result, of weakness on the one hand, or of poverty on the other, from the deficiency or the excess of population, the Greek political writers strongly insist; and propose in consequence various modes of maintaining the relative proportion desired.

Plato, in the republic which he considers in his books of laws, limits the number of free citizens and of habitations, to five thousand and forty; and this number he thinks may be preserved, if the father of every family choose one out of his sons for his successor to the lot of land which he

has possessed, and disposing of his daughters in marriage according to law, distribute his other sons, if he have any, to be adopted by those citizens who are without children. But if the number of children upon the whole be either too great or too few, the magistrate is to take the subject particularly into his consideration, and to contrive so that the same number of five thousand and forty families should still be maintained. There are many modes, he thinks, of effecting this object. Procreation when it goes on too fast, may be checked, or when it goes on too slow, may be encouraged by the proper distribution of honors and marks of ignominy, and by the admonitions of the elders to prevent or promote it according to circumstances.[1]

In his philosophical republic[2] he enters more particularly into this subject, and proposes that the most excellent among the men should be joined in marriage to the most excellent among the women, and the inferior citizens matched with the inferior females; and that the offspring of the first should be brought up, of the others,

[1] Plato de Legibus, lib. v.

[2] Plato de Republicâ, lib. v.

among the Greeks.

not. On certain festivals appointed by the laws, the young men and women who are betrothed are to be assembled, and joined together with solemn ceremonies. But the number of marriages is to be determined by the magistrates, that taking into consideration the drains from wars, diseases, and other causes, they may preserve, as nearly as possible, such a proportion of citizens as will be neither too numerous nor too few, according to the resources and demands of the state. The children who are thus born from the most excellent of the citizens are to be carried to certain nurses destined to this office, inhabiting a separate part of the city; but those which are born from the inferior citizens, and any from the others which are imperfect in their limbs, are to be buried in some obscure and unknown place.

He next proceeds to consider the proper age for marriage, and determines it to be twenty for the woman and thirty for the man. Beginning at twenty, the woman is to bear children for the state till she is forty, and the man is to fulfil his duty in this respect, from thirty to fifty-five. If a man produce a child into public either before or after this period, the action is to be considered in the same criminal and profane light as if he had

produced one without the nuptial ceremonies, and instigated solely by incontinence. The same rule should hold, if a man who is of the proper age for procreation be connected with a woman who is also of the proper age, but without the ceremony of marriage by the magistrate; he is to be considered as having given to the state a spurious, profane, and incestuous offspring. When both sexes have passed the age assigned for presenting children to the state, Plato allows a great latitude of intercourse, but no child is to be brought to light. Should any infant by accident be born alive, it is to be exposed in the same manner as if the parents could not support it.'

From these passages it is evident that Plato fully saw the tendency of population to increase beyond the means of subsistence. His expedients for checking it are indeed execrable; but the expedients themselves, and the extent to which they were to be used, show his conceptions of the magnitude of the difficulty. Contemplating as he certainly must do in a small republic a great proportional drain of people by wars, if he could still propose to destroy the children of all the inferior and

---

Plato de Repub. lib. v.

less perfect citizens, to destroy also all that were born not within the prescribed ages and with the prescribed forms, to fix the age of marriage late, and after all to regulate the number of these marriages, his experience and his reasonings must have strongly pointed out to him the great power of the principle of increase, and the necessity of checking it.

Aristotle appears to have seen this necessity still more clearly. He fixes the proper age of marriage at thirty-seven for the men, and eighteen for the women, which must of course condemn a great number of women to celibacy, as there never can be so many men of thirty-seven as there are women of eighteen. Yet though he has fixed the age of marriage for the men at so late a period, he still thinks that there may be too many children, and proposes that the number allowed to each marriage should be regulated; and if any woman be pregnant after she has produced the prescribed number, that an abortion should be procured before the fœtus has life.

The period of procreating children for the state is to cease with the men at fifty-four or fifty-five, because the offspring of old men, as well as of men too young, is imperfect both in body and mind.

Of the checks to population

When both sexes have passed the prescribed age, they are allowed to continue a connexion; but, as in Plato's republic, no child which may be the result is to be brought to light.[1]

In discussing the merits of the republic proposed by Plato in his books of laws, Aristotle is of opinion that he has by no means been sufficiently attentive to the subject of population; and accuses him of inconsistency in equalizing property without limiting the number of children. The laws on this subject, Aristotle very justly observes, require to be much more definite and precise in a state where property is equalized than in others. Under ordinary governments an increase of population would only occasion a greater subdivision of landed property, where in such a republic the supernumeraries would be altogether destitute, because the lands being reduced to equal and as it were elementary parts, would be incapable of further partition.[2]

[1] Aristotelis Opera. De Repub. lib. vii. c. xvi.

[2] De Repub. lib. ii. c. vi. Gillies' Aristotle, vol. ii. b. ii. p. 87. For the convenience of those who may not choose the trouble of consulting the original, I refer at the same time to Gillies' translation; but some passages he has wholly omitted, and of others he has not given the literal sense, his object being a free version.

among the Greeks.

He then remarks that it is necessary in all cases to regulate the proportion of children, that they may not exceed the proper number. In doing this deaths and barrenness are of course to be taken into consideration. But if, as in the generality of states, every person be left free to have as many children as he pleases, the necessary consequence must be poverty; and poverty is the mother of villany and sedition. On this account Pheidon of Corinth, one of the most ancient writers on the subject of politics, introduced a regulation directly the reverse of Plato's, and limited population without equalizing possessions.[1]

Speaking afterwards of Phaleas of Chalcedon, who proposed as a most salutary institution, to equalize wealth among the citizens, he adverts again to Plato's regulations, respecting property, and observes, that those who would thus regulate the extent of fortunes ought not to be ignorant that it is absolutely necessary at the same time to regulate the number of children. For if children multiply beyond the means of supporting them, the law will necessarily be broken, and families

[1] De Repub. lib. ii. c. vii. Gillies' Aristot. vol. ii. b. ii. p. 87.

will be suddenly reduced from opulence to beggary, a revolution always dangerous to public tranquillity.[1]

It appears from these passages that Aristotle clearly saw, that the strong tendency of the human race to increase, unless checked by strict and positive laws, was absolutely fatal to every system founded on equality of property; and there cannot surely be a stronger argument against any system of this kind than the necessity of such laws as Aristotle himself proposes.

From a remark which he afterwards makes respecting Sparta, it appears still more clearly that he fully understood the principle of population. From the improvidence of the laws relating to succession, the landed property in Sparta had been engrossed by a few, and the effect was greatly to diminish the populousness of the country. To remedy this evil, and to supply men for continual wars, the kings preceding Lycurgus had been in the habit of naturalizing strangers. It would have been much better, however, according to Aristotle, to have increased the number of citi-

[1] De Repub. lib. ii. c. vii. Gillies' Aristot. vol. ii. b. ii. p. 91.

zens by a nearer equalization of property. But the law relating to children was directly adverse to this improvement. The legislator wishing to have many citizens had encouraged as much as possible the procreation of children. A man who had three sons was exempted from the night-watch; and he who had four, enjoyed a complete immunity from all public burdens. But it is evident, Aristotle most justly observes, that the birth of a great number of children, the division of the lands remaining the same, would necessarily cause only an accumulation of poverty.

He here seems to see exactly the error, into which many other legislators beside Lycurgus have fallen, and to be fully aware, that to encourage the birth of children, without providing properly for their support, is to obtain a very small accession to the population of a country at the expense of a very great accession of misery.

The legislator of Crete as well as Solon, Pheidon, Plato, and Aristotle, saw the necessity of checking population in order to prevent general

---

[1] De Repub. lib. ii. c. ix. Gillies' Aristot. vol. ii. b. ii. p. 107.

[2] Aristot. de Repub. lib. ii. c. x. Gillies' Aristot, vol. ii. b. ii. p. 113.

poverty; and as we must suppose that the opinions of such men, and the laws founded upon them, would have considerable influence, it is probable that the preventive check to increase from late marriages and other causes operated to a considerable degree among the free citizens of Greece.

For the positive checks to population we need not look beyond the wars in which these small states were almost continually engaged, though we have an account of one wasting plague, at least, in Athens; and Plato supposes the case of his republic being greatly reduced by disease.[1] Their wars were not only almost constant, but extremely bloody. In a small army the whole of which would probably be engaged in close fight, a much greater number in proportion would be slain, than in the large modern armies, a considerable part of which often remains untouched;[2] and as all the free citizens of these republics were generally employed as soldiers in every war, losses would be felt very severely, and would not appear to be very easily repaired.

[1] De legibus, lib. v.

[2] Hume, Essay, xi. p. 451.

CHAPTER XIV.

Of the Checks to Population among the Romans.

THE havoc made by war in the smaller states of Italy, particularly during the first struggles of the Romans for power, seems to have been still greater than in Greece. Wallace, in his dissertation on the numbers of mankind, after alluding to the multitudes which fell by the sword in these times, observes, "On an accurate review of the "history of the Italians during this period, we "shall wonder how such vast multitudes could be "raised as were engaged in those continual wars "till Italy was entirely subdued."[1] And Livy expresses his utter astonishment that the Volsci and Æqui, so often as they were conquered, should have been able to bring fresh armies into the field. But these wonders will perhaps be sufficiently accounted for if we suppose what seems to be highly probable, that the constant drains from wars, had in-

[1] Dissertation, p. 62. 8vo. 1763, Edinburgh.

[2] Lib. vi. c. xii.

troduced the habit of giving nearly full scope to the power of population, and that a much greater number of youths, in proportion to the whole people, were yearly rising into manhood and becoming fit to bear arms, than is usual in other states not similarly circumstanced. It was, without doubt, the rapid influx of these supplies, which enabled them, like the ancient Germans, to astonish future historians, by renovating in so extraordinary a manner their defeated and half destroyed armies.

Yet there is reason to believe that the practice of infanticide prevailed in Italy, as well as in Greece, from the earliest times. A law of Romulus forbad the exposing of children before they were three years old,[1] which implies that the custom of exposing them as soon as they were born had before prevailed. But this practice was of course never resorted to, but when the drains from wars were insufficient to make room for the rising generation; and consequently though it may be considered as one of the positive checks to the full power of increase, yet, in the actual state of things, it certainly contributed rather to promote than impede population.

[1] Dionysius Halicarn. lib. ii. 15.

among the Romans.

Among the Romans themselves, engaged as they were in incessant wars from the beginning of their republic to the end of it, many of which were dreadfully destructive, the positive check to population from this cause alone must have been enormously great. But this cause alone, great as it was, would never have occasioned that want of Roman citizens, under the emperors, which prompted Augustus and Trajan to issue laws for the encouragement of marriage and of children, if other causes still more powerful in depopulation had not concurred.

When the equality of property, which had formerly prevailed in the Roman territory, had been destroyed by degrees, and the land had fallen into the hands of a few great proprietors, the citizens who were by this change successively deprived of the means of supporting themselves, would naturally have no resource to prevent them from starving, but that of selling their labor to the rich, as in modern states; but from this resource they were completely cut off by the prodigious number of slaves, which, increasing by constant influx with the increasing luxury of Rome, filled up every employment both in agriculture and manufactures. Under such circumstances, so far from being as-

tonished that the number of free citizens should decrease, the wonder seems to be, that any should exist beside the proprietors. And in fact many could not have existed but for a strange and preposterous custom, which however, perhaps, the strange and unnatural state of the city required, that of distributing vast quantities of corn to the poorer citizens gratis. Two hundred thousand received this distribution in Augustus's time; and it is highly probable that a great part of them had little else to depend upon. It is supposed to have been given to every man of full years; but the quantity was not enough for a family and too much for an individual.[1] It could not therefore enable them to increase; and, from the manner in which Plutarch speaks of the custom of exposing children among the poor,[2] there is great reason to believe that many were destroyed in spite of the jus trium liberorum. The passage in Tacitus in which, speaking of the Germans, he alludes to this custom in Rome seems to point to the same

[1] Hume, Essay xi. p. 488.

[2] De amore prolis.

among the Romans.

conclusion.[1] What effect, indeed, could such a law have among a set of people who appear to have been so completely barred out from all the means of acquiring a subsistence, except that of charity, that they would be scarcely able to support themselves, much less a wife and two or three children. If half of the slaves had been sent out of the country, and the people had been employed in agriculture and manufactures, the effect would have been to increase the number of Roman citizens with more certainty and rapidity than ten thousand laws for the encouragement of children.

It is possible that the jus trium liberorum, and the other laws of the same tendency, might have been of some little use among the higher classes

[1] De moribus Germanorum, 19. How completely the laws relating to the encouragement of marriage and of children were despised, appears from a speech of Minucius Felix in Octavio, cap. 30. "*Vos enim video procreatos* "*filios nunc feris et avibus exponere, nunc adstrangulatos* "*misero mortis genere elidere; sunt quæ in ipsis visceribus* "*medicaminibus ejotis originem futuri hominis extinguant,* "*et parricidium faciant antequam pariant.*"

This crime had grown so much into a custom in Rome that even Pliny attempts to excuse it; "Quoniam aliqua- "rum fecunditas plena liberis tali veniâ indiget." Lib. xxix. c. iv.

of the Roman citizens; and indeed from the nature of these laws, consisting as they did principally of privileges, it would appear that they were directed chiefly to this part of society. But vicious habits of every possible kind preventive of population[1] seem to have been so generally prevalent at this period, that no corrective laws could have any considerable influence. Montesquieu justly observes, that "the corruption of manners "had destroyed the office of censor, which had "been established itself to destroy the corruption "of manners; but when the corruption of man-"ners becomes general, censure has no longer "any force."[2] Thirty-four years after the passing of the law of Augustus respecting marriage, the Roman knights demanded its repeal. On separating the married and the unmarried, it appeared that the latter considerably exceeded in number the former; a strong proof of the inefficacy of the law.[3]

[1] Sed jacet aurato via ulla puerpera lecto
Tantum artes hujus, tantum medicamina possunt.
Quæ steriles facit, atque homines in ventre necandos
Conducit. Juvenal, sat. vi, 593.

[2] Esprit des Loix, liv. xxiii. c. 21.

[3] Ibid.

among the Romans.

In most countries vicious habits preventive of population appear to be a consequence rather than a cause of the infrequency of marriage; but in Rome the depravity of morals seems to have been the direct cause which checked the marriage union, at least among the higher classes. It is impossible to read the speech of Metellus Numidicus in his censorship without indignation and disgust. "If it were possible," he says, "entirely to go without wives, we would deliver "ourselves at once from this evil; but as the "laws of nature have so ordered it that we can "neither live happy with them nor continue the "species without them, we ought to have more "regard for our lasting security than for our transient pleasures."[1]

Positive laws to encourage marriage and population, enacted on the urgency of the occasion, and not mixed with religion, as in China and some other countries, are seldom calculated to answer the end which they aim at, and therefore generally indicate ignorance in the legislator who proposes them; but the apparent necessity of them al-

[1] Aulus Gellius, lib. i. c. 6.

most invariably indicates a very great degree of moral and political depravity in the state; and in the countries in which they are most strongly insisted on, not only vicious manners will generally be found to prevail, but political institutions extremely unfavorable to industry, and consequently to population.

On this account I cannot but agree with Wallace[1] in thinking that Hume was wrong in his supposition, that the Roman world was probably the most populous during the long peace under Trajan and the Antonines.[2] We well know that wars do not depopulate much while industry continues in vigor; and that peace will not increase the number of people when they cannot find the means of subsistence. The renewal of the laws relating to marriage under Trajan indicates the continued prevalence of vicious habits, and of a languishing industry, and seems to be inconsistent with the supposition of a great increase of population.

It might be said perhaps, that the vast profusion of slaves would more than make up for the want of Roman citizens; but it appears that the labor of

[1] Dissertation, Appendix, p. 247.

[2] Essay xi. p. 505.

these slaves was not sufficiently directed to agriculture to support a very great population. Whatever might be the case with some of the provinces, the decay of agriculture in Italy seems to be generally acknowledged. The pernicious custom of importing great quantities of corn to distribute gratis to the people had given it a blow which it never afterwards recovered. Hume observes, that "when the Roman authors complained that Italy, "which formerly exported corn, became depen- "dent on all the provinces for its daily bread, they "never ascribed this alteration to the increase of "its inhabitants, but to the neglect of tillage and "agriculture."[1] And in another place he says, "All ancient authors tell us that there was a per- "petual flux of slaves to Italy from the remoter "provinces, particularly Syria, Cilicia, Cappado- "cia, and the Lesser Asia, Thrace, and Egypt; "yet the number of people did not increase in "Italy; and writers complain of the continual decay "of industry and agriculture."[2] It seems but little probable that the peace under Trajan and the Antonines should have given so sudden a turn to the

[1] Essay xi. p. 504.
[2] Id. p. 433.

habits of the people as essentially to alter this state of things.

On the condition of slavery it may be observed, that there cannot be a stronger proof of its unfavorableness to the propagation of the species in the countries where it prevails, than the necessity of this continual influx. The necessity forms at once a complete refutation of the observation of Wallace, that the ancient slaves were more serviceable in raising up people than the inferior ranks of men in modern times.[1] Though it is undoubtedly true, as he observes, that all our laborers do not marry, and that many of their children die, and become sickly and useless through the poverty and negligence of their parents;[2] yet notwithstanding these obstacles to increase, there is perhaps scarcely an instance to be produced, where the lower classes of society in any country, if free, do not raise up people fully equal to the demand for their labor.

To account for the checks to population which are peculiar to a state of slavery, and which render a constant recruit of numbers necessary, we must

[1] Dissert. on the numbers of mankind, p. 91.
[2] Id. p. 88.

among the Romans.

adopt the comparison of slaves to cattle, which Wallace and Hume have made; Wallace, to show that it would be the interest of masters to take care of their slaves and rear up their offspring;[1] and Hume, to prove that it would more frequently be the interest of the master to prevent than to encourage their breeding.[2] If Wallace's observation had been just, it is not to be doubted that the slaves would have kept up their own numbers with ease by procreation; and as it is acknowledged that they did not do this, the truth of Hume's observation is clearly evinced. "To rear a child "in London till he could be serviceable would "cost much dearer than to buy one of the same age "from Scotland or Ireland, where he had been "raised in a cottage, covered with rags, and fed "on oatmeal and potatoes. Those who had slaves "therefore, in all the richer and more populous "countries, would discourage the pregnancy of "the females, and either prevent or destroy the "birth."[3] It is acknowledged by Wallace, that the male slaves greatly exceeded in number the fe-

[1] Dissert. on the numbers of mankind, p. 89.
[2] Hume, Essay, xi. p. 433.
[3] Ibid.

males,[1] which must necessarily be an additional obstacle to their increase. It would appear therefore that the preventive check to population must have operated with very great force among the Greek and Roman slaves; and as they were often ill treated, fed perhaps scantily, and sometimes great numbers of them confined together in close and unwholesome ergastula, or dungeons,[2] it is probable that the positive checks to population from disease were also severe, and that when epidemics prevailed they would be most destructive in this part of the society.

The unfavorableness of slavery to the propagation of the species in the country where it prevails is not however decisive of the question respecting the absolute population of such a country, or the greater question respecting the populousness of ancient and modern nations. We know that some countries could afford a great and constant supply of slaves, without being in the smallest degree depopulated themselves; and if these supplies were poured in, as they probably would be, exactly in proportion to the demand for labor in the

[1] Appendix to Dissertation, p. 182.

[2] Hume, Essay xi. p. 430.

among the Romans.

nation which received them, the question respecting the populousness of this nation would rest precisely on the same grounds as in modern states and depend upon the number of people which it could employ and support. Whether the practice of domestic slavery therefore prevail or not, it may be laid down as a position not to be controverted, that, taking a sufficient extent of territory to include within it exportation and importation, and allowing some variation for the prevalence of luxury or of frugal habits, the population of these countries will always be in proportion to the food which the earth is made to produce. And no cause, physical or moral, unless it operate in an excessive and unusual manner, can have any considerable and permanent effect on the population, except in as far as it influences the production and distribution of the means of subsistence.

[1] The extreme insalubrity of Batavia, and perhaps the plague in some countries, may be considered as physical causes operating in an excessive degree. The extreme and unusual attachment of the Romans to a vicious celibacy, and the promiscuous intercourse in Otaheite, may be considered as moral causes of the same nature. Such instances may perhaps form exceptions to the general observation.

Of the checks to population

In the controversy concerning the populousness of ancient and modern nations, this point has not been sufficiently attended to, and physical and moral causes have been brought forward on both sides, from which no just inference in favor of either party could be drawn. It seems to have escaped the attention of both writers, that the more productive and populous a country is in its actual state, the less probably will be its power of obtaining a further increase of produce, and consequently the more checks must necessarily be called into action to keep the population down to the level of this stationary, or slowly increasing produce. From finding such checks, therefore, in ancient or modern nations, no inference can be drawn against the absolute populousness of either. On this account, the prevalence of the small-pox, and of other disorders unknown to the ancients, can by no means be considered as an argument against the populousness of modern nations, though to these physical causes both Hume[1] and Wallace[2] allow considerable weight.

[1] Essay xi. p. 425.
[2] Dissertation, p. 80.

among the Romans.

In the moral causes which they have brought forward, they have fallen into a similar error. Wallace introduces the positive encouragements to marriage among the ancients, as one of the principal causes of the superior populousness of the ancient world; but the necessity of positive laws to encourage marriage certainly rather indicates a want than an abundance of people; and in the instance of Sparta, to which he particularly refers, it appears from the passage in Aristotle, mentioned in the last chapter, that the laws to encourage marriage were instituted for the express purpose of remedying a marked deficiency of people. In a country with a crowded and overflowing population, a legislator would never think of making express laws to encourage marriage and the procreation of children. Other arguments of Wallace will be found upon examination to be almost equally ineffectual to his purpose.

Some of the causes which Hume produces are in the same manner unsatisfactory, and rather make against the inference which he has in view than for it. The number of footmen, housemaids,

[1] Dissertation, Id. p. 93.

and other persons remaining unmarried in modern states, he allows to be an argument against their populousness.[1] But the contrary inference of the two appears to be the more probable. When the difficulties attending the rearing a family are very great, and consequently many persons of both sexes remain single, we may naturally enough infer that population is stationary, but by no means that it is not absolutely great; because the difficulty of rearing a family may arise from the very circumstance of a great absolute population, and the consequent fullness of all the channels to a livelihood; though the same difficulty may undoubtedly exist in a thinly-peopled country, which is yet stationary in its population. The number of unmarried persons in proportion to the whole number may form some criterion by which we can judge whether population be increasing, stationary, or decreasing; but will not enable us to determine any thing respecting absolute populousness. Yet even in this criterion we are liable to be deceived. In some of the southern countries early marriages are general, and very few women remain in a state

[1] Essay xi.

of celibacy, yet the people not only do not increase, but the actual number is perhaps small. In this case the removal of the preventive check is made up by the excessive force of the positive check. The sum of all the positive and preventive checks taken together forms undoubtedly the immediate cause which represses population; but we never can expect to obtain and estimate accurately this sum in any country; and we can certainly draw no safe conclusion from the contemplation of two or three of these checks taken by themselves, because it so frequently happens, that the excess of one check is balanced by the defect of some other. Causes which affect the number of births or deaths may or may not affect the average population, according to circumstances; but causes which affect the production and distribution of the means of subsistence must necessarily affect population; and it is therefore only on these causes beside actual enumerations, on which we can with any certainty rely.

All the checks to population, which have been hitherto considered in the course of this review of human society, are clearly resolvable into moral restraint, vice, and misery.

Of that branch of the preventive check which I have denominated moral restraint, though it

might be rash to affirm that it has not had some share in repressing the natural power of population, yet it must be allowed to have operated very feebly indeed, compared with the others. Of the other branch of the preventive check which comes under the head of vice, though its effect appears to have been very considerable in the latter periods of Roman history, and in some other countries; yet, upon the whole, its operation seems to have been inferior to the positive checks. A large portion of the procreative power appears to have been called into action, the redundancy from which was checked by violent causes. Among these war is the most prominent and striking feature; and after this may be ranked famines and violent diseases. In most of the countries considered, the population seems to have been seldom measured accurately according to the average and permanent means of subsistence, but generally to have vibrated between the two extremes, and consequently the oscillations between want and plenty are strongly marked, as we should naturally expect among less civilized nations.

ESSAY, &c.

BOOK II.

OF THE CHECKS TO POPULATION IN THE DIFFERENT STATES OF MODERN EUROPE.

CHAPTER I.

Of the Checks to Population in Norway.

IN reviewing the states of modern Europe, we shall be assisted in our inquiries by registers of births, deaths, and marriages, which, when they are complete and correct, point out to us with some degree of precision, whether the prevailing checks to population are of the positive or of the preventive kind. The habits of most European nations are of course much alike, owing to the similarity of the circumstances in which they are placed; and it is to be expected therefore, that their registers should sometimes give the same results.

Relying, however, too much upon this occasional coincidence, political calculators have been led into the error of supposing that there is, generally speaking, an invariable order of mortality in all countries; but it appears, on the contrary, that this order is extremely variable; that it is very different in different places of the same country, and within certain limits depends upon circumstances which it is in the power of man to alter.

Norway, during nearly the whole of the last century, was in a peculiar degree exempt from the drains of people by war. The climate is remarkably free from epidemic sicknessess, and, in common years, the mortality is less than in any other country in Europe, the registers of which are known to be correct.[1] The proportion of the annual deaths to the whole population, on an average throughout the whole country, is only as 1 to 48.[2] Yet the population of Norway never seems to have increased with great rapidity. It has made a start within the last ten or fifteen years, but till that period its progress must have been very slow, as we

[1] The registers for Russia give a smaller mortality; but it is supposed that they are defective.

[2] Thaarup's Statistik der Danischen Monarchie, vol. ii. p. 4.

know that the country was peopled in very early ages, and in 1769 its population was only 723,141.[1]

Before we enter upon an examination of its internal economy, we must feel assured that as the positive checks to its population have been so small, the preventive checks must have been proportionably great; and we accordingly find from the registers, that the proportion of yearly marriages to the whole population is as 1 to 130,[2] which is a smaller proportion of marriages than appears in the registers of any other country, except Switzerland.

One cause of this small number of marriages is the mode in which the enrolments for the army have been conducted till within very few years. Every man in Denmark and Norway born of a farmer or laborer is a soldier.[3] Formerly the commanding officer of the district might take these peasants at any age he pleased, and he in general preferred those that were from twenty-five to thir-

[1] Thaarup's Statistik der Danischen Monarchie, Table ii. p. 5.

[2] Id. vol. ii. p. 4.

[3] The few particulars which I shall mention relating to Norway, were collected during a summer excursion in that country in the year 1799.

ty, to such as were younger. After being taken into the service, a man could not marry without producing a certificate signed by the minister of the parish, that he had substance enough to support a wife and family; and even then it was further necessary for him to obtain the permission of the officer. The difficulty, and sometimes the expense of obtaining this certificate and permission, generally deterred those who were not in very good circumstances from thinking of marriage till their service of ten years was expired; and as they might be enrolled at any age under thirty-six, and the officers were apt to take the oldest first, it would often be late in life before they could feel themselves at liberty to settle.

Though the minister of the parish had no legal power to prevent a man from marrying who was not enrolled for service; yet it appears that custom had in some degree sanctioned a discretionary power of this kind, and the priest often refused to join a couple together, when the parties had no probable means of supporting a family.

Every obstacle however of this nature, whether arising from law or custom, has now been entirely removed. A full liberty is given to marry at any age, without leave either of the officer or priest;

and in the enrolments for the army, all those of the age of twenty are taken first, then all those of twenty-two, and so on till the necessary number is completed.

The officers in general disapprove of this change. They say that a young Norwegian has not arrived at his full strength, and does not make a good soldier at twenty. And many are of opinion that the peasants will now marry too young, and that more children will be born than the country can support.

But independently of any regulations respecting the military enrolments, the peculiar state of Norway throws very strong obstacles in the way of early marriages. There are no large manufacturing towns to take off the overflowing population of the country; and as each village naturally furnishes from itself a supply of hands more than equal to the demand, a change of place in search of work seldom promises any success. Unless therefore an opportunity of foreign emigration offer, the Norwegian peasant generally remains in the village in which he was born; and as the vacancies in houses and employments must occur very slowly owing to the small mortality that takes place, he will often see himself compelled to wait a con-

siderable time before he can attain a situation which will enable him to rear a family.

The Norway farms have in general a certain number of married laborers employed upon them, in proportion to their size, who are called housemen. They receive from the farmer a house and a quantity of land nearly sufficient to maintain a family; in return for which they are under the obligation of working for him at a low and fixed price whenever they are called upon. Except in the immediate neighborhood of the towns, and on the sea-coast, the vacancy of a place of this kind is the only prospect which presents itself of providing for a family. From the small number of people and the little variety of employment, the subject is brought distinctly within the view of each individual; and he must feel the absolute necessity of repressing his inclinations to marriage, till some such vacancy offer. If from the plenty of materials, he should be led to build a house himself, it could not be expected that the farmer, if he had a sufficient number of laborers before, should give him an adequate portion of land with it; and though he would in general find employment for three or four months in the summer, yet there would be little chance of his earning enough to

in Norway.

support a family, during the whole year. It is probable that it was in cases of this kind where the impatience of the parties prompted them to build, or propose to build a house themselves, and trust to what they could earn, that the parish priests exercised the discretionary power of refusing to marry.

The young men and women therefore are obliged to remain with the farmers as unmarried servants, till a houseman's place becomes vacant: and of these unmarried servants, there is in every farm and every gentleman's family, a much greater proportion than the work would seem to require. There is but little division of labor in Norway. Almost all the wants of domestic economy are supplied in each separate household. Not only the common operations of brewing, baking, and washing, are carried on at home, but many families make or import their own cheese and butter, kill their own beef and mutton, import their own grocery stores; and the farmers and country people in general spin their own flax and wool, and weave their own linen and woollen clothes. In the largest towns, such as Christiana and Drontheim, there is nothing that can be called a market. It is extremely difficult to get a joint of fresh meat;

and a pound of fresh butter is an article not to be purchased even in the midst of summer. Fairs are held at certain seasons of the year, and stores of all kinds of provisions that will keep are laid in at these times; and if this care be neglected great inconveniences are suffered, as scarcely any thing is to be bought retail. Persons who make a temporary residence in the country, or small merchants not possessed of farms, complain heavily of this inconvenience; and the wives of merchants who have large estates say, that the domestic economy of a Norway family is so extensive and complicated, that the necessary superintendence of it requires their whole attention, and that they can find no time for any thing else.

It is evident that a system of this kind must require a great number of servants. It is said besides that they are not remarkable for diligence, and that to do the same quantity of work more are necessary than in other countries. The consequence is, that in every establishment the proportion of servants will be found two or three times as great as in England; and a farmer in the country, who in his appearance is not to be distinguished from any of his laborers, will sometimes have a household of twenty persons, including his own family.

in Norway.

The means of maintenance to a single man are, therefore, much less confined than to a married man; and under such circumstances the lower classes of people cannot increase much, till the increase of mercantile stock, or the division and improvement of farms, furnishes a greater quantity of employment for married laborers. In countries more fully peopled this subject is always involved in great obscurity. Each man naturally thinks that he has as good a chance of finding employment as his neighbor, and that if he fail in one place he shall succeed in some other. He marries therefore, and trusts to fortune; and the effect too frequently is, that the redundant population occasioned in this manner is repressed by the positive checks of poverty and disease. In Norway the subject is not involved in the same obscurity. The number of additional families which the increasing demand for labor will support is more distinctly marked. The population is so small that even in the towns it is difficult to fall into any considerable error on this subject; and in the country the division and improvement of an estate, and the creation of a greater number of housemen's places must be a matter of complete notoriety. If a man can obtain one of these places he marries, and is able to support a family;

if he cannot obtain one, remains single. A redundant population is thus prevented from taking place, instead of being destroyed after it has taken place.

It is not to be doubted that the general prevalence of the preventive check to population, owing to the state of society which has been described, together with the obstacles thrown in the way of early marriages from the enrolments for the army, have powerfully contributed to place the lower classes of people in Norway in a better situation than could be expected from the nature of the soil and climate. On the seacoast where, on account of the hopes of an adequate supply of food from fishing, the preventive check does not prevail in the same degree, the people are very poor and wretched; and, beyond comparison, in a worse state than the peasants in the interior of the country.

The greatest part of the soil in Norway is absolutely incapable of bearing corn, and the climate is subject to the most sudden and fatal changes. There are three nights about the end of August which are particularly distinguished by the name of iron nights, on account of their sometimes blasting the promise of the fairest crops. On these

in Norway.

occasions the lower classes of people necessarily suffer; but as there are scarcely any independent laborers, except the housemen that have been mentioned, who all keep cattle, the hardship of being obliged to mix the inner bark of the pine with their bread is mitigated by the stores of cheese, of salt butter, of salt meat, salt fish, and bacon, which they are generally enabled to lay up for the winter provision. The period in which the want of corn presses the most severely is generally about two months before harvest; and at this time the cows, of which the poorest housemen have generally two or three, and many five or six, begin to give milk, which must be a great assistance to the family, particularly to the younger part of it. In the summer of the year 1799, the Norwegians appeared to wear a face of plenty and content, while their neighbors the Swedes were absolutely starving: and I particularly remarked that the sons of housemen and the farmers' boys were fatter, larger, and had better calves to their legs, than boys of the same age and in similar situations in England.

It is also without doubt owing to the prevalence of the preventive check to population as much as to any peculiar healthiness of the air.

that the mortality in Norway is so small. There is nothing in the climate or the soil that would lead to the supposition of its being in any extraordinary manner favorable to the general health of the inhabitants; but as in every country the principal mortality takes place among very young children, the smaller number of these in Norway, in proportion to the whole population, will naturally occasion a smaller mortality than in other countries, supposing the climate to be equally healthy.

It may be said perhaps, and with truth, that one of the principal reasons of the small mortality in Norway is, that the towns are inconsiderable and few, and that few people are employed in unwholesome manufactories. In many of the agricultural villages of other countries, where the preventive check to population does not prevail in the same degree, the mortality is as small as in Norway. But it should be recollected, that the calculation in this case is for those particular villages alone; whereas in Norway the calculation of 1 in 48 is for the whole country. The redundant population of these villages is disposed of by constant emigrations to the towns, and the deaths of a great part of those that are born in the parish do

in Norway.

not appear in the registers. But in Norway all the deaths are within the calculation, and it is clear that if more were born than the country could support, a great mortality must take place in some form or other. If the people were not destroyed by disease, they would be destroyed by famine. It is indeed well known that bad and insufficient food will produce disease and death in the purest air and the finest climate. Supposing therefore no great foreign emigration, and no extraordinary increase in the resources of the country, nothing but the more extensive prevalence of the preventive check to population in Norway can secure to her a smaller mortality than in other countries, however pure her air may be, or however healthy the employments of her people.

Norway seems to have been anciently divided into large estates or farms, called Gores; and as according to the law of succession all the brothers divide the property equally, it is a matter of surprise, and a proof how slowly the population has hitherto increased, that these estates have not been more subdivided. Many of them are indeed now divided into half gores and quarter gores, and some still lower; but it has in general been the custom on the death of the father, for a commis-

sion to value the estate at a low rate, and if the eldest son can pay his brothers' and sisters'[1] shares, according to this valuation, by mortgaging his estate or otherwise, the whole is awarded to him; and the force of habit and natural indolence too frequently prompt him to conduct the farm after the manner of his forefathers, with few or no efforts at improvement.

Another great obstacle to the improvement of farms in Norway is a law which is called Odel's right, by which any lineal descendant can repurchase an estate which had been sold out of the family, by paying the original purchase-money. Formerly collateral as well as lineal descendants had this power, and the time was absolutely unlimited, so that the purchaser could never consider himself as secure from claims. Afterwards the time was limited to twenty years, and in 1771 it was still further limited to ten years, and all the collateral branches were excluded. It must however be an uninterrupted possession of ten years; for if before the expiration of this term, a person who has a right to claim under the law give notice to the possessor that he does not forego his

[1] A daughter's portion is the half of a son's portion.

claim, though he is not then in a condition to make the purchase, the possesor is obliged to wait six years more before he is perfectly secure. And as in addition to this the eldest in the lineal descent may reclaim an estate that had been repurchased by a younger brother, the law even in its present amended state must be considered as a very great bar to improvement; and in its former state, when the time was unlimited and the sale of estates in this way was more frequent, it seems as if it must have been a most complete obstacle to the melioration of farms, and obviously accounts for the very slow increase of population in Norway for many centuries.

A further difficulty in the way of clearing and cultivating the land arises from the fears of the great timber merchants respecting the woods. When a farm has beeen divided among children and grandchildren, as each proprietor has a certain right in the woods, each in general endeavors to cut as much as he can; and the timber is thus felled before it is fit, and the woods spoiled. To prevent this, the merchants buy large tracts of woods of the farmers, who enter into a contract that the farm shall not be any further subdivided or more houses placed upon it; at least that if

the number of families be increased they should have no right in the woods. It is said that the merchants who make these purchases are not very strict, provided the smaller farmers and housemen do not take timber for their houses. The farmers who sell these tracts of wood are obliged by law to reserve to themselves the right of pasturing their cattle, and of cutting timber sufficient for their houses, repairs, and firing.

A piece of ground round a houseman's dwelling cannot be enclosed for cultivation without an application, first, to the proprietor of the woods, declaring that the spot is not fit for timber, and afterwards to a magistrate of the district, whose leave on this occasion is also necessary, probably for the purpose of ascertaining whether the leave of the proprietor had been duly obtained.

In addition to these obstacles to improved cultivation, which may be considered as artificial, the nature of the country presents an insuperable obstacle to a cultivation and population in any respect proportioned to the surface of the soil. The Norwegians, though not in a nomadic state, are still in a considerable degree in the pastoral state, and depend very much upon their cattle. The high grounds that border on the mountains are ab-

in Norway.

solutely unfit to bear corn, and the only use to which they can be put is to pasture cattle upon them for three or four months during the summer. The farmers accordingly send all their cattle to these grounds at this time of the year, under the care of a part of their families; and it is here that they make all their butter and cheese for sale or for their own consumption. The great difficulty is to support their cattle during the long winter, and for this purpose it is necessary that a considerable proportion of the most fertile land in the vallies should be mowed for hay. If too much of it were taken into tillage, the number of cattle must be proportionably diminished, and the greatest part of the higher grounds would become absolutely useless; and it might be a question in that case, whether the country upon the whole would support a greater population.

Notwithstanding however all these obstacles, there is a very considerable capacity of improvement in Norway, and of late years it has been called into action. I heard it remarked by a professor at Copenhagen, that the reason why the agriculture of Norway had advanced so slowly was that there were no gentlemen farmers to set examples of improved cultivation, and break the rou-

tine of ignorance and prejudice in the conduct of farms, that had been handed down from father to son for successive ages. From what I saw of Norway I should say that this want is now in some degree supplied. Many intelligent merchants and well-informed general officers are at present engaged in farming. In the country round Christiania, very great improvements have taken place in the system of agriculture; and even in the neighborhood of Drontheim the culture of artificial grasses has been introduced, which in a country where so much winter feed is necessary for cattle is a point of the highest importance. Almost every where the cultivation of potatoes has succeeded, and they are growing more and more into general use, though in the distant parts of the country they are not yet relished by the common people.

It has been more the custom of late years than formerly to divide farms: and as the vent for commodities in Norway is not perhaps sufficient to encourage the complete cultivation of large farms, this division of them has probably contributed to the improvement of the land. It seems indeed to be universally agreed, among those who are in a situation to be competent judges,

in Norway.

that the agriculture of Norway in general has advanced considerably of late years; and the registers show that the population has followed with more than equal pace. On an average of ten years, from 1775 to 1784, the proportion of births to deaths was 141 to 100.[1] But this seems to have been rather too rapid an increase; as the following year, 1785, was a year of scarcity and sickness, in which the deaths considerably exceeded the births; and for four years afterwards, particularly in 1789, the excess of births was not great. But in the five years from 1789 to 1794, the proportion of births to deaths was nearly 150 to 100.[2]

Many of the most thinking and best informed persons express their apprehensions on this subject, and in the probable result of the new regulations

[1] Thaarup's Statistik der Danischen Monarchie, vol. ii. p. 4.

[2] Id. table i. p. 4. In the Tableau Statistique des Etats Danois, since published, it appears that the whole number of births for the five years subsequent to 1794, was 138,799, of deaths 94,530, of marriages 34,313. These numbers give the proportion of births to deaths, as 146 to 100, of births to marriages as 4 to 1, and of deaths to marriages as 275 to 100. The average proportion of yearly births is stated to be $\frac{1}{31}$, and of yearly deaths $\frac{1}{45}$ of the whole population.

respecting the enrolments of the army, and the apparent intention of the court of Denmark to encourag at all events the population. No very unfavorable season has occurred in Norway since 1785; but it is feared that, in the event of such a season, the most severe distress might be felt from the rapid increase that has of late taken place.

Norway is, I believe, almost the only country in Europe where a traveller will hear any apprehensions expressed of a redundant population, and where the danger to the happiness of the lower classes of people from this cause is in some degree seen and understood. This obviously arises from the smallness of the population altogether, and the consequent narrowness of the subject. If our attention were confined to one parish, and there were no power of emigrating from it, the most careless observer could not fail to remark that if all married at twenty, it would be perfectly impossible for the farmers, however carefully they might improve their land, to find employment and food for those that would grow up; but when a great number of these parishes are added together in a populous kingdom, the largeness of the subject, and the power of moving from place to place, ob-

in Norway.

scure and confuse our view. We lose sight of a truth which before appeared completely obvious; and in a most unaccountable manner, attribute to the aggregate quantity of land a power of supporting people beyond comparison greater than the sum of all its parts.

CHAPTER II

Of the Checks to Population in Sweden.

SWEDEN is in many respects in a state similar to that of Norway. A very large proportion of its population is in the same manner employed in agriculture; and in most parts of the country the married laborers who work for the farmers, like the housemen of Norway, have a certain portion of land for their principal maintenance, while the young men and women that are unmarried live as servants in the farmers' families. This state of things however is not so complete and general as in Norway; and from this cause added to the greater extent and population of the country, the superior size of the towns, and the greater variety of employment, it has not occasioned in the same degree the prevalence of the preventive check to population, and consequently the positive check has operated with more force, or the mortality has been greater.

According to a paper published by M. Wargentin in the *Mémoires abrégés de l'Académie*

Royale des Sciences de Stockholm,[1] the yearly average mortality in all Sweden, for nine years ending in 1663, was to the population as 1 to $34\frac{3}{4}$.[2] M. Wargentin furnished Dr. Price with a continuance of these tables, and an average of 21 years gives a result of 1 to $34\frac{3}{7}$, nearly the same.[3] This is undoubtedly a very great mortality, considering the large proportion of the population in Sweden which is employed in agriculture. It appears from some calculations in Cantzlaer's account of Sweden, that the inhabitants of the towns are to the inhabitants of the country only as 1 to 13;[4] whereas in well-peopled countries, the proportion is often as 1 to 3, or above.[5] The superior mortality of towns therefore could not much affect the general proportion of Sweden.

The average mortality of villages according to

[1] 1 vol. 4to. printed at Paris, 1772.

[2] Page 27.

[3] Price's Observ. on Revers. Paym. vol. ii. p. 126.

[4] Mémoires pour servir à la connoissance des affaires politiques et économiques du Royaume de Suède, 4to. 1776, c. vi. p. 187. This work is considered as very correct in its information, and is in great credit at Stockholm.

[5] Sussmilch's Gottliche Ordnung, vol. i. chap. ii. sect. xxxiv. edit. 1798.

Sussmilch is 1 in 40.[1] In Prussia and Pomerania, which include a number of great and unhealthy towns, and where the inhabitants of the towns are to the inhabitants of the country as 1 to 4, the mortality is less than 1 in 37.[2] The mortality in Norway, as has been mentioned before, is 1 in 48, which is in a very extraordinary degree less than in Sweden, though the inhabitants of the towns in Norway bear a greater proportion to the inhabitants of the country than in Sweden. The towns in Sweden are indeed larger and more unhealthy than in Norway; but there is no reason to think that the country is naturally more unfavorable to the duration of human life. The mountains of Norway are in general not habitable. The only peopled parts of the country are the vallies. Many of these vallies are deep and narrow clefts in the mountains; and the cultivated spots in the bottom, surrounded as they are by almost perpendicular cliffs of a prodigious height,[4] which intercept

[1] Sussmilch's Gottliche Ordnung, vol. i. chap. ii. sect. xxxv. p. 91.

[2] Id. vol. iii. p. 60.

[3] Thaarup's Statistik der Danischen Monarchie, vol. ii. tab. ii. p. 5. 1765.

[4] Some of these vallies are strikingly picturesque.

in Sweden.

the rays of the sun for many hours, do not seem as if they could be so healthy as the more exposed and drier soil of Sweden.

It is difficult therefore entirely to account for the mortality of Sweden, without supposing that the habits of the people, and the continual cry of the government for an increase of subjects, tend to press the population too hard against the limits of subsistence, and consequently to produce diseases which are the necessary effect of poverty and bad nourishment; and this, from observation, appears to be really the case.

Sweden does not produce food sufficient for its population. Its annual want in the article of grain, according to a calculation made from the years 1768 and 1772, is 440,000 tuns.[1] This

---

The principal road from Christiania to Drontheim leads for nearly 180 English miles through a continued valley of this kind, by the side of a very fine river, which in one part stretches out into the extensive lake Miosen. I am inclined to believe that there is not any river in all Europe, the course of which affords such a constant succession of beautiful and romantic scenery. It goes under different names in different parts. The verdure in the Norway vallies is peculiarly soft, the foliage of the trees luxuriant, and in summer no traces appear of a northern climate.

[1] Mémoires du Royaume de Suède, able xvii. p. 174.

quantity or near it has in general been imported from foreign countries, beside pork, butter, and cheese, to a considerable amount.[1]

The distillation of spirits in Sweden is supposed to consume above 400,000 tuns of grain: and when this distillation has been prohibited by government, a variation in defect appears in the tables of importations;[2] but no great variations in excess are observable to supply the deficiencies in years of scanty harvests, which, it is well known, occur frequently. In years the most abundant, when the distillation has been free, it is asserted that 388,000 tuns have in general been imported.[3] It follows therefore that the Swedes consume all the produce of their best years, and nearly 400,000 more; and that in their worst years, their consumption must be diminished by nearly the whole deficiency in their crops. The mass of the people appears to be too poor to purchase nearly the same quantity of corn at a very advanced price.

---

[1] Mémoires du Royaume de Suède, table xvii. c. vi. p. 198.

[2] Id. table xlii. p. 418. c. vi. p. 201. I did not find out exactly the measure of the Swedish tun. It is rather less than our sack or half quarter.

[3] Mémoires du Royaume de Suède, c. vi. p. 201.

in Sweden.

There is no adequate encouragement therefore to corn merchants to import in great abundance; and the effect of a deficiency of one fourth or one third in the crops is to oblige the laborer to content himself with nearly three fourths or two thirds of the corn which he used before, and to supply the rest by the use of any substitutes, which necessity the mother of invention may suggest. I have said nearly, because it is difficult to suppose that the importations should not be something greater in years of scarcity than in common years, though no marked differences of this kind appear in the tables published by Cantzlaer. The greatest importation, according to these tables, was in the year 1768, when it amounted to 590,265 tuns of grain;[1] but even this greatest importation is only 150,000 tuns above the average wants of the country; and what is this to supply a deficiency of one fourth or one third of a crop? The whole importation is indeed in this respect trifling.

The population of Sweden at the time that Cantzlaer wrote, was about two millions and a half.[2] He allows four tuns of grain to a man.[3]

[1] Mémoires du Royaume de Suède, table xlii. p. 418.
[2] Id. ch. vi. p. 184.
[3] Id. p. 196.

Upon this supposition the annual wants of Sweden would be ten millions of tuns, and four or five hundred thousand would go but a little way in supplying a deficiency of two millions and a half, or three millions; and if we take only the difference from the average importation it will appear, that the assistance which the Swedes receive from importation in a year of scarcity is perfectly futile.

The consequence of this state of things is, that the population of Sweden is in a peculiar manner affected by every variation of the seasons; and we cannot be surprised at a very curious and instructive remark of M. Wargentin, that the registers of Sweden show that the births, marriages, and deaths increase and decrease according to the state of the harvests. From the nine years of which he had given tables, he instances the following:

		Marriages.	Births.	Deaths.
Barren years.	1757	18799	81878	68054
	1758	19584	83299	74370
Abundant years.	1759	23210	85579	62662
	1760	23383	90635	60083[1]

[1] Mémoires Abrégés de l'Académie de Stockholm, p. 29.

in Sweden.

Here it appears that in the year 1760 the births were to the deaths as 15 to 10; but in the year 1758 only as 11 to 10. By referring to the enumerations of the population in 1757 and 1760,[1] which M. Wargentin has given, it appears that the number of marriages in the year 1760 in proportion to the whole population was as 1 to 101; in the year 1757, only as 1 to about 124. The deaths in 1760 were to the whole population as 1 to 39; in 1757 as 1 to 32, and in 1758 as 1 to 31.

In some observations on the Swedish registers, M. Wargentin says, that in the unhealthy years about 1 in 29 have died annually, and in the healthy years 1 in 39; and that taking a middle term the average mortality might be considered at 1 in 36.[2] But this inference does not appear to be just, as a mean between 29 and 39 would give 34; and indeed the tables which he has himself brought forward contradict an average mortality of 1 in 36, and prove that it is about 1 in $34\frac{3}{4}$.

The proportion of yearly marriages to the whole population appears to be on an average, nearly as 1 to 112, and to vary between the extremes of 1

[1] Mémoires Abrégés de l'Académie de Stockholm, p. 21, 22.

[2] Id. p. 29.

to 101, and 1 to 124, according to the temporary prospect of a support for a family. Probably indeed, it varies between much greater extremes, as the period from which these calculations are made is merely for nine years.

In another paper which M. Wargentin published in the same collection, he again remarks, that in Sweden the years which are the most fruitful in produce are the most fruitful in children.[1]

If accurate observations were made in other countries it is highly probable that differences of the same kind would appear, though not to the same extent.[2] With regard to Sweden they clearly prove that its population has a very strong tendency to increase; and that it is not only always ready to follow with the greatest alertness any average increase in the means of subsistence, but that it makes a start forwards at every temporary and occasional increase of food, by which means it is continually going beyond the average increase,

[1] Mémoires abrégés de l'Acad. de Stockholm, p. 31.

[2] This has been confirmed with regard to England, by the abstracts of parish registers which have lately been published. The years 1795 and 1800 are marked by a diminution of marriages and births, and an increase of deaths.

in Sweden.

and is repressed by the periodical returns of severe want, and the diseases arising from it.

Yet notwithstanding this constant and striking tendency to overflowing numbers, strange to say! the government and the political economists of Sweden are continually calling out for population, population. Cantzlaer observes that the government not having the power of inducing strangers to settle in the country, or of augmenting at pleasure the number of births, has occupied itself since 1748 in every measure which appeared proper to increase the population of the country.[1] But suppose that the government really possessed the power of inducing strangers to settle, or of increasing the number of births at pleasure, what would be the consequence? If the strangers were not such as to introduce a better system of agriculture, they would either be starved themselves, or cause more of the Swedes to be starved; and if the yearly number of births were considerably increased, it appears to me perfectly clear from the tables of M. Wargentin, that the principal effect would be merely an increase of mortality. The actual population might perhaps even be diminished by it,

[1] Mémoires du Royaume de Suede, c. vi. p. 188.

as when epidemics have once been generated by bad nourishment and crowded houses, they do not always stop when they have taken off the redundant population, but take off with it a part, and sometimes a very considerable part of that which the country might be able properly to support.

In all very northern climates in which the principal business of agriculture must necessarily be compressed into the small space of a few summer months, it will almost inevitably happen that during this period a want of hands is felt; but this temporary want should be carefully distinguished from a real and effectual demand for labor, which includes the power of giving employment and support through the whole year, and not merely for two or three months. The population of Sweden in the natural course of its increase will always be ready fully to answer this effectual demand; and a supply beyond it, whether from strangers or an additional number of births, could only be productive of misery.

It is asserted by Swedish authors that a given number of men and of days produces in Sweden only a third part of what is produced by the same number of each in some other countries;[1] and

[1] Memoires du Royaume de Suède, (Cantzlaer) ch. iv. p. 191.

in Sweden.

heavy accusations are in consequence brought against the national industry. Of the general grounds for such accusations, a stranger cannot be a competent judge; but in the present instance it appears to me that more ought to be attributed to the climate and soil, than to an actual want of industry in the natives. For a large portion of the year their exertions are necessarily cramped by the severity of the climate; and during the time when they are able to engage in agricultural operations, the natural indifference of the soil, and the extent of surface required for a given produce inevitably employ a great proportional quantity of labor. It is well know in England, that a farm of large extent consisting of a poor soil is worked at a much greater expense for the same produce than a small one of rich land. The natural poverty of the soil in Sweden, generally speaking, cannot be denied.

In a journey up the western side of the country, and afterwards in crossing it from Norway to Stockholm, and thence up the eastern coast to the passage over to Finland, I confess that I saw fewer marks of a want of national industry than I should have expected. As far as I could judge, I very seldom saw any land uncultivated which

would have been cultivated in England, and I certainly saw many spots of land in tillage which never would have been touched with a plough here. These were lands in which every five or ten yards, there were large stones or rocks, round which the plough must necessarily be turned or lifted over them; and the one or the other is generally done according to their size. The plough is very light, and drawn by one horse, and in ploughing among the stumps of the trees when they are low, the general practice is to lift it over them. The man who holds the plow does this very nimbly, with little or no stop to the horse.

Of the value of those lands for tillage, which are at present covered with immense forests, I could be no judge; but both the Swedes and the Norwegians are accused of clearing these woods away too precipitately, and without previously considering what is likely to be the real value of the land when cleared. The consequence is, that for the sake of one good crop of rye, which may always be obtained from the manure afforded by the ashes of the burnt trees, much growing timber is sometimes spoiled, and the land perhaps afterwards becomes almost entirely useless. After the crop of rye has been obtained, the common practice is

in Sweden.

to turn cattle in upon the grass, which may accidentally grow up. If the land be naturally good, the feeding of the cattle prevents fresh firs from rising; but if it be bad the cattle of course cannot remain long in it, and the seeds, with which every wind is surcharged sow the ground again thickly with firs.

On observing many spots of this kind both in Norway and Sweden, I could not help being struck with the idea, that though for other reasons it was very little probable, such appearances certainly made it seem possible that these countries might have been better peopled formerly than at present; and that lands which are now covered with forests might have produced corn a thousand years ago. Wars, plagues, or that greater depopulator than either, a tyrannical government might have suddenly destroyed or expelled the greatest part of the inhabitants, and a neglect of the land for twenty or thirty years in Norway or Sweden would produce a very strange difference in the face of the country. But this is merely an idea which I could not help mentioning, but which the reader already knows has not had weight enough with me to make me suppose the fact in any degree probable.

To return to the agriculture of Sweden. In-

dependently of any deficiency in the national industry, there are certainly some circumstances in the political regulations of the country which tend to impede the natural progress of its cultivation. There are still some burdensome corvées remaining, which the possessors of certain lands are obliged to perform for the domains of the crown.[1] The posting of the country is undoubtedly very cheap and convenient to the traveller; but is conducted in a manner to occasion a great waste of labor to the farmer, both in men and horses. It is calculated by the Swedish economists, that the labor which would be saved by the abolition of this system alone would produce annually 300,000 tuns of grain. The very great distance of the markets in Sweden, and the very incomplete division of labor which is almost a necessary consequence of it, occasion also a great waste of time and exertion. And if there be no marked want of diligence and activity among the Swedish peasants, there is certainly a want of knowledge in the best modes of regulating the rotation of their crops and of manuring and improving their lands.

[1] Memoires du Royaume de Suède, ch. vi. p. 202.
[2] Id. p. 204.
[3] Id. ch. vi.

in Sweden.

If the government were employed in removing these impediments, and in endeavors to encourage and direct the industry of the farmers, and circulate the best information on agricultural subjects, it would do much more for the population of the country, than by the establishment of five hundred foundling hospitals.

According to Cantzlaer, the principal measures in which the government had been engaged for the encouragement of the population were the establishment of colleges of medicine, and of lying-in and foundling hospitals. The establishment of colleges of medicine for the cure of the poor gratis may in many cases be extremely beneficial, and was so probably in the particular circumstances of Sweden; but the example of the hospitals of France, which have the same object, may create a doubt whether even such establishments are universally to be recommended. Lying-in hospitals, as far as they have an effect, are probably rather prejudicial than otherwise, as according to the principle on which they are generally conducted, their tendency is certainly to encourage vice. Foundling hos-

[1] Memoires du Royaume de Suède, ch. vi. p. 188.

pitals, whether they attain their professed and immediate object or not, are in every view hurtful to the state; but the mode in which they operate I shall have occasion to discuss more particularly in another chapter.

The Swedish government however has not been exclusively employed in measures of this nature. By an edict in 1776 the commerce of grain was rendered completely free throughout the whole interior of the country; and with regard to the province of Scania, which grows more than its consumption, exportation free of every duty was allowed.[1] Till this period the agriculture of the southern provinces had been checked by the want of vent for their grain on account of the difficulty of transport, and the absolute prohibition of selling it to foreigners at any price. The northern provinces are still under some difficulties in this respect, though as they never grow a quantity sufficient for their consumption these difficulties are not so much felt.[2] It may be observed however in general, that there is no check more fatal to improving cultivation than any difficulty in the vent of its produce, which prevents the farmer

[1] Mémoires du Royaume de Suède, ch. vi. p. 204.
[2] Ibid.

in Sweden.

from being able to obtain in good years a price for his corn not much below the general average.

But what perhaps has contributed more than any other cause to the increasing population of Sweden is the abolition of a law in 1748, which limited the number of persons to each henman or farm.[1] The object of this law appears to have been to force the children of the proprietors to undertake the clearing and cultivation of fresh lands, by which it was thought that the whole country would be sooner improved. But it appeared from experience that these children, being without sufficient funds for such undertakings, were obliged to seek their fortune in some other way, and great numbers in consequence are said to have emigrated. A father may now however not only divide his landed property into as many shares as he thinks proper; but these divisions are particularly recommended by the government, and considering the immense size of the Swedish henmans and the impossibility of their being cultivated completely by one family, such divisions must in every point of view be highly useful.

The population of Sweden in seventeen hun-

[1] Mémoires du Royaume de Suède, ch. vi. p. 177.

dred and fifty one, was 2,229,661.[1]. In 1799, according to an account which I received in Stockholm from professor Nicander, the successor to M. Wargentin, it was 3,043,731. This is a very considerable addition to the permanent population of the country which has followed a proportional increase in the produce of the soil, as the imports of corn are not greater than they were formerly, and there is no reason to think that the condition of the people is on an average worse.

This increase however has not gone forwards without periodical checks, which, if they have not for the time entirely stopped its progress, have always retarded the rate of it. How often these checks have recurred during the last 50 years, I am not furnished with sufficient data to be able to say, but I can mention some of them. From the paper of M. Wargentin already quoted in this chapter, it appears that the years 1757 and 1758 were barren, and comparatively mortal years. If we were to judge from the increased importation of 1768,[2] this would also appear to be an unproductive year. According to the additional tables

[1] Mémoires du Royaume de Suede, ch. vi. p. 184.
[2] Mémoires de l'Académie de Stockholm, p. 29.
[3] Mémoires du Royaume de Suede, table xlii.

in Sweden.

with which M. Wargentin furnished Dr. Price, the years 1771, 1772, and 1773, were particularly mortal.[1] The year 1789 must have been very highly so, as in the accounts which I received from professor Nicander this year alone materially affected the average proportion of births to deaths for the twenty years ending in 1795. This proportion, including the year 1789, was 100 to 77; but abstracting it, was 100 to 75; which is a great difference for one year to make in an average of twenty. To conclude the catalogue, the year 1799, when I was in Sweden, must have been a very fatal one. In the provinces bordering on Norway the peasants called it the worst that they had ever remembered. The cattle had all suffered extremely during the winter, from the drought of the preceding year; and in July, about a month before the harvest, a considerable portion of the people was living upon bread made of the inner bark of the fir, and of dried sorrel, absolutely without any mixture of meal to make it more palatable and nourishing. The sallow looks and melancholy countenances of the peasants betrayed the unwholesomeness of their nourishment. Ma-

[1] Price's Observ. on Revers. Pay. vol. ii. p. 125.

ny had died, but the full effects of such a diet had not then been felt. They would probably appear afterwards in the form of some epidemic sickness.

The patience with which the lower classes of people in Sweden bear these severe pressures is perfectly astonishing, and can only arise from their being left entirely to their own resources, and from the belief that they are submitting to the great law of necessity, and not to the caprices of their rulers. Most of the married laborers, as has been before observed, cultivate a small portion of land; and when from an unfavorable season their crops fail or their cattle die, they see the cause of their want, and bear it as the visitation of providence. Every man will submit with becoming patience to evils which he believes to arise from the general laws of nature; but when the vanity and mistaken benevolence of the government and the higher classes of society have by a perpetual interference with the concerns of the lower classes endeavored to persuade them, that all the good which they enjoy is conferred upon them by their rulers and rich benefactors, it is very natural that they should attribute all the evil which they suffer to the same sources, and patience under such circumstances cannot rea-

in Sweden.

sonably be expected. Though to avoid still greater evils, we may be allowed to repress this impatience by force if it show itself in overt acts, yet the impatience itself appears to be clearly justified in this case; and those are in a great degree answerable for its consequences, whose conduct has tended evidently to encourage it.

Though the Swedes had supported the severe dearth of 1799 with extraordinary resignation; yet afterwards on an edict of the government to prohibit the distillation of spirits, it is said that there were considerable commotions in the country. The measure itself was certainly calculated to benefit the people; and the manner in which it was received affords a curious proof of the different temper with which people bear an evil, arising from the laws of nature, or a privation caused by the edicts of a government.

The sickly periods in Sweden which have retarded the rate of its increase in population, appear in general to have arisen from the unwholesome nourishment occasioned by severe want. And this want has been caused by unfavorable seasons falling upon a country which was without any reserved store, either in its general exports, or in the liberal division of food to the laborer in com-

mon years, and which was therefore peopled fully up to its produce before the occurrence of the scanty harvest. Such a state of things is a clear proof that if, as some of the Swedish economists assert, their country ought to have a population of nine or ten millions,[1] they have nothing further to do than to make it produce food sufficient for such a number, and they may rest perfectly assured that they will not want mouths to eat it without the assistance of lying-in and foundling hospitals.

Notwithstanding the mortal year of 1789, it appeared from the accounts which I received from professor Nicander, that the general healthiness of the country had increased. The average mortality for the twenty years ending 1795, was 1 in 37, instead of 1 in less than 35, which had been the average of the preceding twenty years. As the rate of increase had not been accelerated in the twenty years ending in 1795, the diminished mortality must have been occasioned by the increased operation of the preventive check. Another calculation which I received from the professor seemed to confirm this supposition. Accord-

[1] Mémoires du Royaume de Suède, ch. vi. p. 196.

in Sweden

ing to M. Wargentin, as quoted by Sussmilch,[a] 5 standing marriages produced yearly 1 child; but in the latter period, the proportion of standing marriages to annual births was as $5\frac{1}{10}$, and subtracting illegitimate children, as $5\frac{3}{10}$ to 1; a proof that in the latter period the marriages had not been quite so early and so prolific.

[a] Gottliche Ordnung, vol i. c. vi. s. 120. p. 231.

CHAPTER III.

Of the Checks to Population in Russia.

THE lists of births, deaths, and marriages, in Russia, present such extraordinary results, that it is impossible not to receive them with a considerable degree of suspicion; at the same time the regular manner in which they have been collected, and their agreement with each other in different years, entitle them to attention.

In a paper presented in 1786 by B. F. Herman to the academy of Petersburgh, and published in the *Nova Acta Academiæ, tom. iv.* a comparison is made of the births, deaths, and marriages in the different provinces and towns of the empire, and the following proportions are given:

In Petersburgh the births are to the burials, as	13	to 80
In the government of Moscow,	21	10
District of Moscow, excepting the town,	21	10
Tver,	26	10
Novogorod,	20	10

Pskovsk,	22 to	10
Resan,	20	10
Veronesch,	29	10
Archbishopric of Vologda,	23	10
Kostroma,	20	10
Archangel,	13	10
Tobolsk,	21	10
Town of Tobolsk,	13	10
Reval,	11	10
Vologda,	12	10

Some of these proportions it will be observed are extraordinarily high. In Veronesch, for instance, the births are to the deaths, nearly as 3 to 1, which is as great a proportion I believe as ever was known in America. The average result however of these proportions has been in some degree confirmed by subsequent observations. Mr. Tooke, in his View of the Russian Empire, makes the general proportion of births to burials throughout the whole country, as 225 to 100,[1] which is 2 and ¼ to 1; and this proportion is taken from the lists of 1793.[2]

From the number of yearly marriages, and

[1] Vol. ii. b. iii. p. 162.
[2] Id. p. 145.

yearly births, M. Herman draws the following conclusions:

	Children
In Petersburgh one marriage yields	4
In the government of Moscow, about	3
Tver,	3
Novogorod,	3
Pskovsk,	3
Resan,	3
Veronesch,	4
Vologda,	4
Kostroma,	3
Archangel,	4
Reval,	4
Government of Tobolsk,	4
Town of Tobolsk, from 1768 to 1778,	3
from 1779 to 1783,	5
in 1783,	6

M. Herman observes that the fruitfulness of marriages in Russia does not exceed that of other countries, though the mortality is much less, as appears from the following proportions, drawn from a rough calculation of the number of inhabitants in each government:

in Russia.

	Dies Annually.
In Petersburgh, . .	1 in 28
In the government of Moscow,	1 32
District of Moscow, . .	1 74
Tver, ...	1 75
Novogorod, . . .	1 68⅛
Pskovsk, ...	1 70⅛
Resan, ...	1 50
Veronesch, ...	1 79
Archbishopric of Vologda,	1 65
Kostroma, . . .	1 59
Archangel, ...	1 28⅛
Reval, ...	1 29
Government of Tobolsk, .	1 44
Town of Tobolsk, . .	1 32
in 1783,	1 22¼

It may be concluded, M. Herman says, that in the greatest number of the Russian provinces the yearly mortality is 1 in 60.[1]

This average number is so high, and some of the proportions in the particular provinces are so extraordinary, that it is impossible to believe them accurate. They have been nearly confirmed, however, by subsequent lists, which, according

[1] Nova Acta Academiæ, tom. iv.

to Mr. Tooke, make the general mortality in all Russia 1 in 58[1] But Mr. Tooke himself seems to doubt the accuracy of this particular department of the registers; and I have since heard from good authority that there is reason to believe that the omissions in the burials are in all the provinces much greater than the omissions in the births, and consequently that the very great excess of births and very small mortality, are more apparent than real. It is supposed that many children, particularly in the Ukraine, are privately interred by their fathers without information to the priest. The numerous and repeated levies of recruits take off great numbers whose deaths are not recorded. From the frequent emigrations of whole families to different parts of the empire, and the transportation of malefactors to Siberia, great numbers necessarily die on journies or in parts where no regular lists are kept; and some omissions are attributed to the neglect of the parish priests, who have an interest in recording the births but not the deaths.

To these reasons I should add, that the popula-

[1] View of the Russian Empire, vol. ii. b. iii. p. 148.

tion of each province is probably estimated by the number of boors belonging to each estate in it; but it is well known that a great part of them has leave to reside in the towns. Their births therefore appear in the province, but their deaths do not. The apparent mortality of the towns is not proportionably increased by this emigration, because it is estimated according to actual enumeration. The bills of mortality in the towns express correctly the numbers dying out of a certain number known to be actually present in these towns; but the bills of mortality in the provinces, purporting to express the numbers dying out of the estimated population of the province, do really only express the numbers dying out of a much smaller population, because a considerable part of the estimated population is absent.

In Petersburgh, it appeared by an enumeration in 1784, that the number of males was 126,827, and of females only 65,619.[1] The proportion of males was therefore very nearly double, arising from the numbers who came to the town to earn their capitation tax, leaving their families in the

[1] Memoire par W. L. Crafft, Nova Acta Academiæ, tom. iv.

country, and from the custom among the lords of retaining a prodigious number of their boors as household servants in Petersburgh and Moscow.

The number of births in proportion to the whole population in Russia is not different from a common average in other countries, being about 1 in 26.[1]

According to the paper of M. Herman already quoted, the proportion of boys dying within the first year is at Petersburgh $\frac{1}{7}$, in the government of Tobolsk $\frac{1}{75}$, in the town of Tobolsk $\frac{1}{3}$, in the Archbishopric of Vologda $\frac{1}{14}$, in Novogorod $\frac{1}{31}$, in Veronesch $\frac{1}{75}$, in Archangel $\frac{1}{7}$. The very small mortality of infants in some of these provinces, particularly as the calculation does not seem to be liable to much error, makes the smallness of the general mortality more credible. In Sweden throughout the whole country, the proportion of infants which dies within the first year is [1] or more.[2]

The proportion of yearly marriages in Russia to the whole population is according to M. Herman, in the towns about 1 in 100, and in the pro-

[1] Tooke's View of Russian Empire, vol ii. b. iii. p. 147.

[2] Memoires Abrégés de l'Academie de Stockholm, p. 28.

vinces about 1 in 70 or 80. According to Mr. Tooke, in the fifteen governments of which he had lists, the proportion was 1 in 92.[1] This is not very different from other countries. In Petersburgh indeed the proportion was 1 in 140;[2] but this is clearly accounted for, by what has already been said of the extraordinary number of the males in comparison of the females.

The registers for the city of Petersburgh are supposed to be such as can be entirely depended upon; and these tend to prove the general salubrity of the climate. But there is one fact recorded in them, which is directly contrary to what has been observed in all other countries. This is a much greater mortality of female children than of male. In the period from 1781 to 1785, of 1000 boys born 147 only died within the first year, but of the same number of girls 310.[3] The proportion is as 10 to 21, which is inconceivable, and must indeed have been in some measure accidental, as in the preceding periods the proportion was only as 10 to 14; but even this is very extraordi-

[1] View of Russ. Emp. vol. ii. b. iii. p. 146.

[2] Memoire par W. L. Krafft, Nova Acta Academiæ, tom. iv.

[3] Ibid.

nary, as it has been generally remarked that in every stage of life except during the period of childbearing, the mortality among females is less than among males. The climate of Sweden does not appear to be very different from that of Russia; and M. Wargentin observes, with respect to the Swedish tables, that it appears from them that the smaller mortality of females is not merely owing to a more regular and less laborious life, but is a natural law which operates constantly from infancy to old age.[2]

According to M. Krafft,[3] the half of all that are born in Petersburgh live to 25; which shows a degree of healthiness in early life very unusual for so large a town; but after twenty, a mortality much greater than in any other town in Europe takes place, which is justly attributed to the immoderate use of brandy.[3] The mortality between 10 and 15 is so small, that only 1 in 47 males and 1 in 29 females die during this period. From 20 to 25 the mortality is so great, that 1 in 9 males

[2] Memoires Abreges de l'Academie de Stockholm. p. 28.

[3] Nova Acta Academiæ, tom. iv.

[3] Tooke's View of the Russian Empire, vol. ii. b. iii. p. 155.

in Russia.

and 1 in 13 females die. The tables show that this extraordinary mortality is occasioned principally by pleurisies, high fevers, and consumptions. Pleurisies destroy $\frac{1}{4}$, high fevers $\frac{1}{5}$, and consumptions $\frac{1}{8}$, of the whole population. The three together take off $\frac{5}{7}$ of all that die.

The general mortality during the period from 1781 to 1785 was, according to M. Krafft, 1 in 37. In a former period it had been 1 in 35, and in a subsequent period, when epidemic diseases prevailed, it was 1 in 29.[1] This average mortality is small for a large town; but there is reason to think from a passage in M. Krafft's memoir,[2] that the deaths in the hospitals, the prisons, and in the *maison des Enfans trouvés*, are either entirely omitted, or not given with correctness; and undoubtedly the insertion of these deaths might make a great difference in the apparent healthiness of the town.

In the *maison des Enfans trouvés* alone, the mortality is prodigious. No regular lists are published, and verbal communications are always lia-

[1] Tooke's View of the Russian Empire, vol. ii. b. iii. p. 151.

[2] See a note in Tooke's View of Russ. Emp. vol. ii. b. iii. p. 150.

ble to some uncertainty. I cannot therefore rely upon the information which I collected on the subject; but from the most careful inquiries which I could make of the attendants at the house in Petersburgh, I understood that 100 a month was the common average. In the preceding winter, which was the winter of 1788, it had not been uncommon to bury 18 a day. The average number received in the day is about 10; and though they are all sent into the country to be nursed three days after they have been in the house, yet, as many of them are brought in a dying state, the mortality must necessarily be great. The number said to be received appears, indeeed, almost incredible; but, from what I saw myself, I should be inclined to believe, that both this and the mortality before mentioned might not be far from the truth. I was at the house about noon, and four children had been just received, one of which was evidently dying, and another did not seem as if it would long survive.

A part of the house is destined to the purpose of a lying-in hospital, where every woman that comes is received and no questions are asked. The children which are thus born are brought up by nurses in the house, and are not sent into the

country like the others. A mother, if she choose it, may perform the office of nurse to her own child in the house, but is not permitted to take it away with her. A child brought to the house may at any time be reclaimed by its parents, if they can prove themselves able to support it; and all the children are marked and numbered on being received, that they may be known and produced to the parents, when required, who, if they cannot reclaim them, are permitted to visit them.

The country nurses receive only two roubles a month, which, as the current paper rouble is seldom worth more than half a crown, is only about fifteen pence a week; yet the general expenses are said to be 100,000 roubles a month. The regular revenues belonging to the institution are not nearly equal to this sum; but the government takes on itself the management of the whole affair, and consequently bears all the additional expenses. As children are received without any limit, it is absolutely necessary, that the expenses should also be unlimited. It is evident that the most dreadful evils must result from an unlimited reception of children, and only a limited fund to support them. Such institutions, therefore, if managed

properly, that is, if the extraordinary mortality do not prevent the rapid accumulation of expense, cannot exist long except under the protection of a very rich government; and even under such protection the period of their failure cannot be very distant.

At six or seven years old the children who have been sent into the country return to the house, where they are taught all sorts of trades, and manual operations. The common hours of working are from 6 to 12, and from 2 till 4. The girls leave the house at 18, and the boys at 20 or 21. When the house is too full, some of those which have been sent in the country are not brought back.

The principal mortality, of course takes place among the infants who are just received, and the children which are brought up in the house; but there is a considerable mortality among those which are returned from the country, and are in the firmest stages of life. I was in some degree surprised at hearing this, after having been particularly struck with the extraordinary degree of neatness, cleanliness, and sweetness, which appeared to prevail in every department. The house itself had been a palace, and all the rooms were

large, airy, and even elegant. I was present while 180 boys were dining. They were all dressed very neatly; the table-cloth was clean, and each had a separate napkin to himself. The provisions appeared to be extremely good, and there was not the smallest disagreeable smell in the room. In the dormitories there was a bed for each child; the beadsteads were of iron without tester or curtains, and the coverlids and sheets particularly clean.

This degree of neatness, almost inconceivable in a large institution, was to be attributed principally to the present empress dowager, who interested herself in all the details of the management, and when at Petersburgh seldom passed a week without inspecting them in person. The mortality which takes place in spite of all these attentions is a clear proof, that the constitution in early youth cannot support confinement and work for eight hours in the day. The children had all rather a pale and sickly countenance, and if a judgment had been formed of the national beauty from the girls and boys in this establishment, it would have been most unfavorable.

It is evident that if the deaths belonging to this institution be omitted, the bills of mortality for

Petersburgh cannot give a representation in any degree near the truth of the real state of the city, with respect to healthiness. At the same time it should be recollected, that some of the observations which attest its healthiness, such as the number dying in a thousand, &c. are not influenced by this circumstance; unless indeed we say what is perhaps true, that nearly all those who would find any difficulty in rearing their children send them to the foundling hospital, and the mortality among the children of those who are in easy circumstances, and live in comfortable houses and airy situations, will of course be much less than a general average taken from all that are born.

The *maison des Enfans trouvés* at Moscow is conducted exactly upon the same principles as that at Petersburgh; and Mr. Tooke gives an account of the surprising loss of children which it had sustained in twenty years, from the time of its first establishment to the year 1786. On this occasion he observes, if we knew precisely the number of those who died immediately after reception, or who brought in with them the germe of dissolution, a small part only of the mortality would probably appear to be fairly attributable to the foundling-hospital; as none would be so unreason-

able as to lay the loss of these certain victims to death to the account of a philanthropical institution, which enriches the country from year to year with an ever-increasing number of healthy, active, and industrious burghers.

It appears to me however, that the greatest part of this premature mortality is clearly to be attributed to these institutions, miscalled philanthropical. If any reliance can be placed on the accounts which are given of the infant mortality in the Russian towns and provinces, it would appear to be unusually small. The greatness of it therefore, at the foundling hospitals, may justly be laid to the account of institutions which encourage a mother to desert her child, at the very time when of all others it stands most in need of her fostering care. The frail tenure by which an infant holds its life will not allow of a remitted attention, even for a few hours.

The surprising mortality which takes place at these two foundling hospitals of Petersburgh and Moscow, which are managed in the best possible manner, as all who have seen them with

[1] View of the Russian Empire, vol. ii. b. iii. p. 201.

one consent assert, appears to me incontrovertibly to prove that the nature of these institutions is not calculated to answer the immediate end that they have in view, which I conceive to be the preservation of a certain number of citizens to the state which might otherwise perhaps perish from poverty or false shame. It is not to be doubted, that if the children received into these hospitals had been left to the management of their parents, taking the chance of all the difficulties in which they might be involved, a much greater proportion of them would have reached the age of manhood, and have become useful members of the state.

When we look a little deeper into this subject, it will appear that these institutions not only fail in their immediate object, but by encouraging, in the most marked manner, habits of licentiousness, discourage marriage, and thus weaken the main spring of population. All the well-informed men with whom I conversed on this subject at Petersburgh agreed invariably, that the institution had produced this effect in a surprising degree. To have a child was considered as one of the most trifling faults which a girl could commit. An English merchant at Petersburgh told me that a Russian girl living in his family, under a mistress

in Russia.

who was considered as very strict, had sent six children to the foundling hospital without the loss of her place.

It should be observed however, that generally speaking six children are not common in this kind of intercourse. Where habits of licentiousness prevail, the births are never in the same proportion to the number of people as in the married state; and therefore the discouragement to marriage, arising from this licentiousness, and the diminished number of births which is the consequence of it, will much more than counterbalance any encouragement to marriage from the prospect held out to parents of disposing of the children which they cannot support.

Considering the extraordinary mortality which occurs in these institutions, and the habits of licentiousness which they have an evident tendency to create, it may be said perhaps with truth, that if a person wished to check population, and were not solicitous about the means, he could not propose a more effectual measure than the establishment of a sufficient number of foundling hospitals, unlimited in their reception of children. And with regard to the moral feelings of a nation it is difficult to conceive that they

must not be very sensibly impaired by encouraging mothers to desert their offspring, and endeavoring to teach them that their love for their newborn infants is a prejudice, which it is the interest of their country to eradicate. An occasional child murder, from false shame, is saved at a very high price, if it can only be done by the sacrifice of some of the best and most useful feelings of the human heart in a great part of the nation.

On the supposition that foundling hospitals attained their proposed end, the state of slavery in Russia would perhaps render them more justifiable in that country than in any other; because every child brought up at the foundling hospitals becomes a free citizen, and in this capacity is likely to be more useful to the state than if it had merely increased the number of slaves belonging to an individual proprietor. But in countries not similarly circumstanced, the most complete success in institutions of this kind would be a glaring injustice to other parts of the society. The true encouragement to marriage is the high price of labor, and an increase of employments, which require to be supplied with proper hands; but if the principal part of these employments, apprenticeships, &c. be filled up

by foundlings, the demand for labor among the legitimate part of the society must be proportionally diminished, the difficulty of supporting a family be increased, and the best encouragement to marriage removed.

Russia has great natural resources. Its produce is, in its present state, above its consumption, and and it wants nothing but greater freedom of industrious exertion, and an adequate vent for its commodities in the interior parts of the country, to occasion an increase of population astonishingly rapid. The principal obstacle to this is the vassalage, or rather slavery, of the peasants, and the ignorance and indolence which almost necessarily accompany such a state. The fortune of a Russian nobleman is measured by the number of boors that he possesses, which in general are saleable like cattle, and not *adscripti glebæ*. His revenue arises from a capitation tax on all the males. When the boors upon an estate are increasing, new divisions of land are made at certain intervals, and either more is taken into cultivation, or the old shares are subdivided. Each family is awarded such a portion of land as it can properly cultivate and will enable it to pay the tax. It is evidently the interest of the boor not to improve his lands

much, and appear to get considerably more than is necessary to support his family and pay the poll-tax; because the natural consequence will be, that in the next division which takes place, the farm which he before possessed will be considered as capable of supporting two families, and he will be deprived of the half of it. The indolent cultivation that such a state of things must produce is easily conceivable. When a boor is deprived of much of the land which he had before used, he makes complaints of inability to pay his tax, and demands permission for himself or his sons to go and earn it in the towns. This permission is in general eagerly sought after, and is granted without much difficulty by the seigneurs, in consideration of a small increase of the poll-tax. The consequence is, that the lands in the country are left half cultivated, and the genuine spring of population impaired in its source.

A Russian nobleman at Petersburgh of whom I asked some questions respecting the management of his estate told me, that he never troubled himself to inquire whether it was properly cultivated or not, which he seemed to consider as a matter in which he was not in the smallest degree concerned. *Cela m'est égal*, says he, *cela me fait ni bien ni mal.*

in Russia.

He gave his boors permission to earn their tax how and where they liked, and as long as he received it he was satisfied. But it is evident that by this kind of conduct he sacrificed the future population of his estate, and the consequent future increase of his revenues to considerations of indolence and present convenience.

It is certain however, that of late years many noblemen have attended more to the improvement and population of their estates, instigated principally by the precepts and examples of the empress Catherine, who made the greatest exertions to advance the cultivation of the country. Her immense importations of German settlers not only contributed to people her state with free citizens, instead of slaves, but what was perhaps of still more importance, to set an example of industry, and of modes of directing that industry totally unknown to the Russian peasants.

These exertions have been crowned, upon the whole, with great success; and it is not to be doubted that, during the reign of the late empress, and since, a very considerable increase of cultivation and of population has been going forward in almost every part of the Russian empire.

In the year 1763, an enumeration of the people,

estimated by the poll-tax, gave a population of 14,726,696; and the same kind of enumeration in 1783 gave a population of 25,677,000, which, if correct, shows a very extraordinary increase; but it is supposed that the enumeration in 1783 was more correct and complete than the one in 1763. Including the provinces not subject to the poll-tax, the general calculation for 1763 was 20,000,000, and for 1796 36,000,000.

In a subsequent addition of Mr. Tooke's View of the Russian Empire, a table of the births, deaths, and marriages, in the Greek church, is given for the year 1799, taken from a respectable German periodical publication, and faithfully extracted from the general returns received by the synod. It contains all the eparchies except Bruzlaw, which from the peculiar difficulties attending a correct list of mortality in that eparchy could not be inserted. The general results are,

	Males.	*Females.*	*Totals.*
Births,	531,015.	460,900.	991,915.
Deaths,	275,582.	264,807.	540,389.
	Marriages, 257,513.		
Overplus of births,	Males, 255,432		451,525.
	Females, 196,093		

[a] Tooke's View of the Russian Empire, vol. ii. book iii. sect i. p. 126. et seq.

in Russia.

To estimate the population Mr. Tooke multiplies the deaths by 58. But as this table has the appearance of being more correct than those which preceded it, and as the proportion of deaths compared with the births is greater in this table than in the others, it is probable that 58 is too great a multiplier. It may be observed, that in this table the births are to the deaths nearly as 183 to 100, the births to marriages as 385 to 100, and the deaths to the marriages as 210 to 100.

These are all more probable proportions than the results of the former tables.

CHAPTER IV.

Of the Checks to Population in the middle parts of Europe.

I HAVE dwelt longer on the northern states of Europe than their relative importance might, to some, appear to demand, because their internal economy is in many respects essentially different from our own, and a personal though slight acquaintance with these countries has enabled me to mention a few particulars which have not yet been before the public. In the middle parts of Europe, the division of labor, the distribution of employments, and the proportion of the inhabitants of towns to the inhabitants of the country differ so little from what is observable in England, that it would be in vain to seek for the checks to their population in any peculiarity of habits and manners sufficiently marked to admit of description. I shall therefore endeavor to direct the reader's attention principally to some inferences drawn from the lists of births, marriages, and deaths in different countries; and these data

will, in many important points, give us more information respecting their internal economy than we could receive from the most observing traveller.

One of the most curious and instructive points of view in which we can consider lists of this kind appears to me to be in the dependence of the marriages on the deaths. It has been justly observed by Montesquieu, that wherever there is a place for two persons to live comfortably a marriage will certainly ensue:[1] but in most of the countries in Europe, in the present state of their population, experience will not allow us to expect any sudden and great increase in the means of supporting a family. The place therefore for the new marriage must, in general, be made by the dissolution of an old one; and we find in consequence, that except after some great mortality, from whatever cause it may have proceeded, or some sudden change of policy peculiarly favorable to cultivation and trade, the number of annual marriages is regulated principally by the number of annual deaths. They reciprocally influence each other. There are few countries in which

[1] Esprit des Loix, liv. xxiii. c. x.

the common people have so much foresight as to defer marriage till they have a fair prospect of being able to support properly all their children. Some of the mortality therefore, in almost every country, is forced by the too great frequency of marriage; and in every country a great mortality, whether arising principally from this cause, or occasioned by the number of great towns and manufactories and the natural unhealthiness of the situation, will necessarily produce a great frequency of marriage.

A most striking exemplification of this observation occurs in the case of some villages in Holland. Sussmilch has calculated the mean proportion of annual marriages compared with the number of inhabitants as between 1 in 107, and 1 in 113, in countries which have not been thinned by plagues or wars, or in which there is no sudden increase in the means of subsistence.[1] And Crome, a later statistical writer, taking a mean between 1 in 92, and 1 in 122, estimates the average proportion of marriages to inhabitants as 1 to 108.[2] But in the

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lvi. p. 126.

[2] Crome, ueber die Grosse und Bevolkerung der Europ. Staaten, p. 88. Leips. 1785.

the middle parts of Europe.

registers of 22 Dutch villages, the accuracy of which according to Sussmilch there is no reason to doubt, it appears that out of 64 persons there is 1 annual marriage.[1] This is a most extraordinary deviation from the mean proportion. When I first saw this number mentioned, not having then adverted to the mortality in these villages, I was much astonished, and very little satisfied with Sussmilch's attempt to account for it, by talking of the great number of trades, and the various means of getting a livelihood in Holland;[2] as it is evident that the country having been long in the same state, there would be no reason to expect any great yearly accession of new trades and new means of subsistence, and the old ones would of course all be full. But the difficulty was immediately solved, when it appeared that the mortality was between 1 in 22 and 1 in 23,[3] instead of being 1 in 36, as is usual when the marriages are in the proportion of 1 to 108. The births and deaths were nearly equal. The extraordinary number of marriages was not caused by the opening of any

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lviii. p. 127.

[2] Id. p. 128.

[3] Id. c. ii. sect. xxxvi. p. 92.

new sources of subsistence, and therefore produced no increase of population. It was merely occasioned by the rapid dissolution of the old marriages by death, and the consequent vacancy of some employment by which a family might be supported.

It might be a question in this case, whether the too great frequency of marriage, that is, the pressure of the population too hard against the limits of subsistence, contributed most to produce the mortality; or the mortality occasioned naturally by the employments of the people and unhealthiness of the country, the frequency of marriage. In the present instance I should, without doubt, incline to the latter supposition, particularly as it seems to be generally agreed, that the common people in Holland before the revolution were, upon the whole, in a good state. The great mortality probably arose partly from the natural marshiness of the soil and the number of canals, and partly from the very great proportion of the people engaged in sedentary occupations, and the very small number in the healthy employments of agriculture.

A very curious and striking contrast to these Dutch villages, tending to illustrate the present subject, will be recollected in what was said re-

the middle parts of Europe.

specting the state of Norway. In Norway, the mortality is 1 in 48, and the marriages 1 in 130. In the Dutch villages, the mortality is 1 in 23, and the marriages 1 in 64. The difference both in the marriages and deaths is above double. They maintain their relative proportions in a very exact manner, and show how much the deaths and marriages mutually depend upon each other, and that except where some sudden start in the agriculture of a country enlarges the means of subsistence, an increase of marriages will only produce an increase of mortality, and *vice versâ*.

In Russia this sudden start in agriculture has in great measure taken place: and consequently though the mortality is very small, yet the proportion of marriages is not so. But in the progress of the population of Russia, if the proportion of marriages remain the same as at present, the mortality will inevitably increase; or if the mortality remain nearly the same, the proportion of marriages will diminish.

Sussmilch has produced some striking instances of this gradual decrease in the proportional number of marriages, in the progress of a country to a fuller population, and a more complete occupation of all the means of gaining a livelihood.

Of the checks to population in

In the town of Halle, in the year 1700, the number of annual marriages was to the whole population as 1 to 77. During the course of the 55 following years, this proportion changed gradually, according to Sussmilch's calculation, to 1 in 167.[1] This is a most extraordinary difference, and if the calculation were quite accurate, would prove to what a degree the check to marriage had operated, and how completely it had measured itself to the means of subsistence. As however the number of people is estimated by calculation, and not taken from enumerations, this very great difference in the proportions may not be perfectly correct, or may be occasioned in part by other causes.

In the town of Leipsic, in the year 1620, the annual marriages were to the population as 1 to 82: from the year 1741 to 1756, they were as 1 to 120.[2]

In Augsburgh, in 1510, the proportion of marriages to the population was as 1 to 86; in 1750, as 1 to 123.[3]

---

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lxii. p. 132.

[2] Id. sect. lxiii. p. 134.

[3] Id. sect. lxiv. p. 134.

the middle parts of Europe.

In Dantzic, in the year 1705, the proportion was as 1 to 89; in 1745 as 1 to 118.[1]

In the dukedom of Magdeburgh, in 1700, the proportion was as 1 to 87; from 1752 to 1755, as 1 to 125.

In the principality of Halberstadt, in 1690, the proportion was as 1 to 88; in 1756, as 1 to 112.

In the dukedom of Cleves, in 1705, the proportion was 1 to 83; in 1755, 1 to 100.

In the Churmark of Brandenburgh, in 1700, the proportion was 1 to 76; in 1755, 1 to 108.

More instances of this kind might be produced; but these are sufficient to show that in countries where from a sudden increase in the means of subsistence, arising either from a great previous mortality, or from improving cultivation and trade, room has been made for a number of marriages much beyond those dissolved by death, this additional number will annually decrease, in proportion as all the new employments are filled up, and there is no further room for an increasing population.

But in countries which have long been fully

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lxv. p. 135.

[2] Id. sect. lxxi. p. 149.

peopled, and in which no new sources of subsistence are opening, the marriages being regulated principally by the deaths, will generally bear nearly the same proportion to the whole population, at one period as at another. And the same constancy will take place, even in countries where there is an annual increase in the means of subsistence, provided this increase be uniform and permanent. Supposing it to be such, as for half a century to allow every year of a fixed proportion of marriages beyond those dissolved by death, the population would then be increasing, and perhaps rapidly; but it is evident that the proportion of marriages to the whole population might remain the same during the whole period.

This proportion Sussmilch has endeavored to ascertain in different countries and different situations. In the villages of the Churmark of Brandenburgh, 1 marriage out of 109 persons takes place annually;[1] and the general proportion for agricultural villages he thinks may be taken at between 1 in 108 and 1 in 115.[2] In the small towns of the Churmark, where the mortality is greater, the pro-

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lvi. p. 125.

[2] Id. sect. lxxv. p. 147.

the middle parts of Europe.

portion is 1 to 98:[1] in the Dutch villages mentioned before, 1 to 64: in Berlin 1 to 110:[2] in Paris 1 to 137. According to Crome in the *unmarrying* cities of Paris and Rome, the proportion is only 1 to 160.[4]

All general proportions however, of every kind, should be applied with considerable caution, as it seldom happens that the increase of food and of population is uniform; and when the circumstances of a country are varying, either from this cause, or from any change in the habits of the people with respect to prudence and cleanliness, it is evident that a proportion which is true at one period will not be so at another.

Nothing is more difficult than to lay down rules on these subjects that do not admit of exceptions. Generally speaking, it might be taken for granted, that an increased facility in the means of gaining a livelihood, either from a great previous mortality, or from improving cultivation and

[1] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lx. p. 129.

[2] Ibid.

[3] Id. sect. lxix. p. 137.

[4] Crome, ueber die Grosse und Bevolkerung der Europaischen Staaten, p. 89.

trade, would produce a greater proportion of annual marriages; but this effect might not perhaps follow. Supposing the people to have been before in a very depressed state, and much of the mortality to have arisen from the want of foresight which usually accompanies such a state, it is possible that the sudden improvement of their condition might give them more of a decent and proper pride; and the consequence would be, that the proportional number of marriages might remain nearly the same, but they would all rear more of their children, and the additional population that was wanted would be supplied by a diminished mortality instead of an increased number of births.

In the same manner, if the population of any country had been long stationary, and would not easily admit of an increase, it is possible that a change in the habits of the people, from improved education, or any other cause, might diminish the proportional number of marriages; but as fewer children would be lost in infancy from the diseases consequent on poverty, the diminution in the number of marriages would be balanced by the diminished mortality, and the population would be kept up to its proper level by a smaller number of births.

the middle parts of Europe.

Such changes therefore in the habits of a people should evidently be taken into consideration.

The most general rule that can be laid down on this subject is, perhaps, that any *direct* encouragements to marriage must be accompanied by an increased mortality. The natural tendency to marriage is in every country so great, that without any encouragements whatever a proper place for a marriage will always be filled up. Such encouragements therefore must be either perfectly futile, or produce a marriage where there is not a proper place for one, and the consequence must necessarily be, increased poverty or mortality. Montesquieu in his Lettres Persannes says, that in the past wars of France, the fear of being inrolled in the militia tempted a great number of young men to marry, without the proper means of supporting a family, and the effect was the birth of a crowd of children, "que l'on cherche encore en France, "et que la misère, la famine, et les maladies en "ont fait disparoître."[1]

After so striking an illustration of the necessary effects of direct encouragements to marriage

[1] Lettre cxxii.

it is perfectly astonishing that in his Esprit des Loix he should say, that Europe is still in a state to require laws which favor the propagation of the human species.

Sussmilch adopts the same ideas, and though he contemplates the case of the number of marriages coming necessarily to a stand, when the food is not capable of further increase, and examines some countries in which the number of contracted marriages is exactly measured by the number dissolved by death, yet he still thinks that it is one of the principal duties of government to attend to the number of marriages. He cites the examples of Augustus and Trajan, and thinks that a prince or a statesman would really merit the name of father of his people, if from the proportion of 1 to 120 or 125, he could increase the marriages to the proportion of 1 to 80 or 90.[a] But as it clearly appears from the instances which he himself produces, that in countries which have been long tolerably well peopled, death is the most powerful of all the encouragements to marriage,

[a] Esprit des Loix, liv. xxiii. c. xxvi.

[a] Sussmilch, Gottliche Ordnung, vol. i. c. iv. sect. lxxviii. p. 151.

the middle parts of Europe.

the prince or statesman who should succeed in thus greatly increasing the number of marriages might perhaps deserve much more justly the title of destroyer than father of his people.

The proportion of yearly births to the whole population must evidently depend principally upon the proportion of the people marrying annually; and therefore in countries which will not admit of a great increase of population must like the marriages depend principally on the deaths. Where an actual decrease of population is not taking place, the births will always supply the vacancies made by death, and exactly so much more as the increasing agriculture and trade of the country will admit. In almost every part of Europe during the intervals of the great plagues, epidemics, or destructive wars, with which it is occasionally visited, the births exceed the deaths; but as the mortality varies very much in different countries and situations, the births will be found to vary in the same manner, though from the excess of births above deaths, which most countries can admit, not in the same degree.

In 39 villages of Holland, where the deaths are about 1 in 23, the births are also about 1 in

23.[1] In 15 villages round Paris, the births bear the same or even a greater proportion to the whole population, on account of a still greater mortality: the births are 1 in $22\frac{7}{10}$, and the deaths the same.[2] in the small towns of Brandenburgh, which are in an increasing state, the mortality is 1 in 29, and the births 1 in $24\frac{7}{10}$.[3] In Sweden, where the mortality is about 1 in 35, the births are 1 in 28.[4] In 1056 villages of Brandenburgh, in which the mortality is about 1 in 39 or 40, the births are about 1 in 30.[5] In Norway, where the mortality is 1 in 48, the births are 1 in 34. In all these instances, the births are evidently measured by the deaths, after making a proper allowance for the excess of births which the state of each country will admit. In Russia this allowance must be great, as although the mortality may perhaps be taken as only 1 in 48 or 50, the births are as high

[1] Sussmilch, Gottliche Ordnung, vol. i. c. vi. s. cxvi. p. 225.

[2] Ibid. and c. ii. s. xxxvii. p. 93.

[3] Id. c. ii. s. xxviii. p. 80, and c. vi. s. cxvi. p. 225.

[4] Id. c. vi. s. cxvi. p. 225.

[5] Ibid.

[6] Thaarup's Statistik, vol. ii. p. 4.

the middle parts of Europe.

as 1 in 26, owing to the present rapid increase of the population.

Statistical writers have endeavored to obtain a general measure of mortality for all countries taken together; but, if such a measure could be obtained, I do not see what good purpose it could answer. It would be but of little use in ascertaining the population of Europe, or of the world; and it is evident that in applying it to particular countries or particular places, we might be led into the grossest errors. When the mortality of the human race, in different countries and different situations, varies so much as from 1 in 20, to 1 in 60, no general average could be used with safety in a particular case, without such a knowledge of the circumstances of the country, with respect to the number of towns, the habits of the people, and the healthiness of the situation, as would probably supersede the necessity of resorting to any general proportion, by the knowledge of the particular proportion suited to the country.

There is one leading circumstance however affecting the mortality of countries, which may be considered as very general, and which is, at the same time, completely open to observation. This

is the number of towns, and the proportion of town to country inhabitants. The unfavorable effects of close habitations and sedentary employments on the health are universal; and therefore on the number of people living in this manner, compared with the number employed in agriculture, will much depend the general mortality of the state. Upon this principle it has been calculated, that when the proportion of the people in the towns to those in the country, is as 1 to 3, then the mortality is about 1 in 36, which rises to 1 in 35, or 1 in 33, when the proportion of townsmen to villagers is 2 to 5, or 3 to 7; and falls below 1 in 36, when this proportion is 2 to 7, or 1 to 4. On these grounds the mortality in Prussia is 1 in 38; in Pomerania, 1 in 37½; in the Neumark, 1 in 37 in the Churmark, 1 in 35; according to the lists for 1756.[1]

The nearest average measure of mortality for all countries, taking towns and villages together is, according to Sussmilch, 1 in 36. But Crome thinks that this measure, though it might possibly have suited the time at which Sussmilch wrote, is

[1] Sussmilch, Gottliche Ordnung, vol. iii. p. 60.
[2] Vol. i. c. ii. s. xxxv. p. 91.

the middle parts of Europe.

not correct at present, when in most of the states of Europe both the number and the size of towns have increased.[1] He seems to be of opinion indeed that this mortality was rather below the truth in Sussmilch's time, and that now 1 in 30 would be found to be nearer the average measure. It is not improbable that Sussmilch's proportion is too small, as he had a little tendency, with many other statistical writers, to throw out of his calculations epidemic years; but Crome has not advanced proofs sufficient to establish a general measure of mortality in opposition to that proposed by Sussmilch. He quotes Busching, who states the mortality of the whole Prussian monarchy to be 1 in 30.[2] But it appears that this inference was drawn from lists for only three years, a period much too short to determine any general average. This proportion for the Prussian monarchy is indeed completely contradicted by subsequent observations mentioned by Crome. According to lists for five years, ending in 1784, the mortality was only 1 in 37.[3]

[1] Crome, uber die Grosse und Bevolkerung der Europaischen Staaten, p. 116.

[2] Crome, uber die Bevolkerung der Europaisch. Staat p. 118.

[3] Id. p. 120.

During the same period the births were to the deaths as 131 to 100. In Silesia the mortality from 1781 to 1784 was 1 in 30; and the births to deaths as 128 to 100. In Gelderland the mortality from 1776 to 1781 was 1 in 27, and the births 1 in 26. These are the two provinces of the monarchy in which the mortality is the greatest. In some others it is very small. From 1781 to 1784 the average mortality in Neufchatel and Ballengin was only 1 in 44, and the births 1 in 31. In the principality of Halberstadtz from 1778 to 1784 the mortality was still less, being only 1 in 45 or 46, and the proportion of births to deaths 137 to 100.[1]

The general conclusion that Crome draws is, that the states of Europe may be divided into three classes, to which a different measure of mortality ought to be applied. In the richest and most populous states, where the inhabitants of the towns are the inhabitants of the country in so high a proportion as 1 to 3, the mortality may be taken as 1 in 30. In those countries which are in a middle state with regard to population and cultivation, the mortality may be considered as 1 in 32. And in

[1] Crome, uber die Bevolkerung der Europaisch. Staat. p. 122.

the middle parts of Europe.

the thinly-peopled northern states, Sussmilch's proportion of 1 in 36 may be applied.[1]

These proportions seem to make the general mortality too great even after allowing epidemic years to have their full effect in the calculations. The improved habits of cleanliness which appear to have prevailed of late years in most of the towns of Europe have probably, in point of salubrity, more than counterbalanced their increased size.

[1] Crome's Europaischen Staaten, p. 127.

CHAPTER V.

Of the Checks to Population in Switzerland.

THE situation of Switzerland is in many respects so different from the other states of Europe; and some of the facts that have been collected respecting it are so curious, and tend so strongly to illustrate the general principles of this work, that it seems to merit a separate consideration.

About 35 or 40 years ago, a great and sudden alarm appears to have prevailed in Switzerland, respecting the depopulation of the country; and the transactions of the Economical Society of Berne, which had been established some years before, were crowded with papers deploring the decay of industry, arts, agriculture, and manufactures, and the imminent danger of a total want of people. The greater part of these writers considered the depopulation of the country as a fact so obvious as not to require proof. They employed themselves therefore chiefly in proposing remedies, and among others, the importation of midwives,

the establishment of foundling hospitals, the portioning of young virgins, the prevention of emigration, and the encouragement of foreign settlers.[1]

A paper containing very valuable materials was, however, about this time published by a Mons. Muret, minister of Vevey, who, before he proceeded to point out remedies, thought it necessary to substantiate the existence of the evil. He made a very laborious and careful research into the registers of different parishes up to the time of their first establishment, and compared the number of births which had taken place during three different periods of 70 years each, the first ending in 1620, the second in 1690, and the third in 1760.[2] Finding, upon this comparison, that the number of births was rather less in the second than in the first period, (and by the help of supposing some omissions in the second period, and some redundances in the third,) that the number of births in the third was also less than in the second, he considered the evidence for a continued

[1] See the different Memoirs for the year 1766.

[2] Memoires, &c. par la Societe Economique de Berne. Annee 1766, premiere partie, p. 15. et seq. octavo. Berne.

depopulation of the country from the year 1550 as incontrovertible.

Admitting all the premises, the conclusion is not perhaps so certain as he imagined it to be, and from other facts which appear in his memoir, I am strongly disposed to believe, that Switzerland during this period came under the case supposed in the last chapter, and that the improving habits of the people with respect to prudence, cleanliness, &c. had added gradually to the general healthiness of the country, and by enabling them to rear up to manhood a greater proportion of their children, had furnished the requisite increase of population with a smaller number of births. Of course, the proportion of annual births to the whole population in the latter period would be less than in the former.

From accurate calculations of M. Muret it appears, that during the last period the mortality was extraordinarily small, and the proportion of children reared from infancy to puberty extraordinarily great.[1] In the former periods, this could not have been the case in the same degree. M. Mu-

[1] Mémoires, &c. par la Société Economique de Berne, table xiii. p. 120. Année 1766.

ret himself observes, that " The ancient depopu-
" lation of the country was to be attributed to the
" frequent plagues which in former times desolat-
" ed it;" and adds, " if it could support itself, not-
" withstanding the frequency of so dreadful an
" evil, it is a proof of the goodness of the climate,
" and of the certain resources which the country
" could furnish, for a prompt recovery of its po-
" pulation."[1] He neglects to apply this observation as he ought, and forgets that such a prompt re-peopling could not take place without an unusual increase of births, and that to enable a country to support itself against such a source of destruction a greater proportion of births to the whole population would be necessary than at other times.

In one of his tables he gives a list of all the plagues that had prevailed in Switzerland, from which it appears, that this dreadful scourge desolated the country, at short intervals, during the whole of the first period, and extended its occasional ravages to within 22 years of the termination of the second.[2]

---

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766. premiere partie, p. 22.

[2] Id. table iv. p. 22.

It would be contrary to every rule of probability to suppose, that during the frequent prevalence of this disorder, the country could be particularly healthy, and the general mortality extremely small. Let us suppose it to have been such as at present takes place in many other countries which are exempt from this calamity, about 1 in 32, instead of 1 in 45, as in the last period. The births would of course keep their relative proportion, and instead of 1 in 36,[1] be about 1 in 26. In estimating the population of the country by the births, we should thus have two very different multipliers for the different periods; and though the absolute number of births might be greater in the first period, yet the fact would by no means imply a greater population.

In the present instance, the sum of the births in 17 parishes during the first 70 years is given as 49,860, which annually would be about 712. This, multiplied by 26, would indicate a population of 18,512. In the last period, the sum of the births is given 43,910,[2] which will be about 626

[1] Mémoires, &c. par la Société Econ. de Berne. Année 1766. premiere partie, table i. p. 21.

[2] Id. p. 16.

in Switzerland.

annually. This, multiplied by 36, will indicate a population of 22,536: and if the multipliers be just it will thus appear, that instead of the decrease which was intended to be proved, there had been a considerable increase.

That I have not estimated the mortality too high during the first period, I have many reasons for supposing, particularly a calculation respecting the neighboring town of Geneva, in which it appears, that in the 16th century the probability of life, or the age to which half of the born live, was only 4,883, rather less than four years and $\frac{9}{10}$ths; and the mean life 18,511, about 18 years and a half. In the 17th century the probability of life was 11,607, above 11 years and a half; the mean life 23,358. In the 18th century, the probability of life had increased to 27,183, 27 years and nearly a fifth, and the mean life to 32 years and a fifth.[1]

It is highly probable, that a diminution of mortality, of the same kind, though perhaps not in the same degree, should have taken place in Switzerland; and we know from the registers of

[1] See a paper in the Bibliotheque Britannique, published at Geneva. tom. iv. p. 328.

other countries which have been already noticed, that a greater mortality naturally produces a greater proportion of births.

Of this dependence of the births on the deaths M. Muret himself produces many instances; but not being aware of the true principle of population, they only serve to astonish him, and he does not apply them.

Speaking of the want of fruitfulness in the Swiss women, he says, that Prussia, Brandenburgh, Sweden, France, and indeed every country, the registers of which he had seen, give a greater proportion of baptisms to the number of inhabitants than the Pays de Vaud, where this proportion is only as 1 to 36.[1] He adds, that from calculations lately made in the Lyonois, it appeared that in Lyons itself, the proportion of baptisms was 1 in 28, in the small towns 1 in 25, and in the parishes 1 in 23 or 24. What a prodigious difference, he exclaims, between the Lyonois and the Pays de Vaud, where the most favorable proportion, and that only in two small parishes of extraordinary fecundity, is not above 1 in 26, and in many parishes it is considerably less

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, premiere partie, p. 47, 48.

in Switzerland.

than 1 in 40. *The same difference*, he remarks, takes place in the *mean life*. In the Lyonois it is a little above 25 years, while in the Pays de Vaud the lowest mean life, and that only in a single marshy and unhealthy parish, is 29½ years, and in many places it is above 45 years.[1]

"But whence comes it," he says, "that the "country where children escape the best from "the dangers of infancy, and where the mean life, "in whatever way the calculation is made is "higher than in any other, should be precisely "that in which the fecundity is the smallest? "How comes it again, that of all our parishes, the "one which gives the mean life the highest, should "also be the one where the tendency to increase "is the smallest?

"To resolve this question I will hazard a con-"jecture, which, however, I give only as such. "Is it not, that in order to maintain in all places "the proper equilibrium of population, God has "wisely ordered things in such a manner, as that "the force of life in each country should be in the "inverse ratio of its fecundity.[2]

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, premiere partie, p. 48.

[2] Ibid.

[3] Id. p. 48 et. seq.

"In effect, experience verifies my conjecture. "Leyzin (a village in the Alps) with a popula- "tion of 400 persons produces but a little above "eight children a year. The Pays de Vaud, in "general, in proportion to the same number of "inhabitants produces 11, and the Lyonoise 16. "But if it happen, that at the age of 20 years, "the 8, the 11, and the 16, are reduced to the "same number, it will appear that the force of "life gives in one place, what fecundity does in "another. And thus the most healthy countries, "having less fecundity, will not overpeople them- "selves, and the unhealthy countries, by their ex- "traordinary fecundity, will be able to sustain "their population."

We may judge of the surprise of M. Muret, at finding from the registers, that the most healthy people were the least prolific, by his betaking himself to a miracle in order to account for it. But the *nodus* does not seem in the present instance to be worthy of such an interference. The fact may be accounted for without resorting to so strange a supposition, as that the fruitfulness of women should vary inversely as their health.

There is certainly a considerable difference in the healthiness of different countries, arising partly

in Switzerland.

from the soil and situation, and partly from the habits and employments of the people. When from these or any other causes whatever a great mortality takes place, a proportional number of births immediately ensues, owing both to the greater number of yearly marriages, from the increased demand for labor, and the greater fecundity of each marriage, from being contracted at an earlier, and naturally a more prolific age.

On the contrary, when from opposite causes the healthiness of any country or parish is extraordinarily great; if, from the habits of the people, no vent for an overflowing population be found in emigration, the absolute necessity of the preventive check will be forced so strongly on their attention, that they must adopt it or starve; and consequently the marriages being very late, the number annually contracted will not be small in proportion to the population, but each individual marriage will naturally be less prolific.

In the parish of Leyzin, noticed by M. Muret, all these circumstances appear to have been combined in an unusual degree. Its situation in the Alps, but yet not too high, gave it probably the most pure and salubrious air; and the employments of the people being all pastoral were con-

sequently of the most healthy nature. From the calculations of M. Muret, the accuracy of which there is no reason to doubt, the probability of life in this parish appeared to be so extraordinarily high as 61 years.[1] And the average number of the births being for a period of 30 years almost accurately equal to the number of deaths[2] clearly proved, that the habits of the people had not led them to emigrate, and that the resources of the parish for the support of population had remained nearly stationary. We are warranted therefore, in concluding, that the pastures were limited, and could not easily be increased either in quantity or quality. The number of cattle which could be kept upon them would of course be limited; and in the same manner, the number of persons required for the care of these cattle.

Under such circumstances how would it be possible for the young men who had reached the age of puberty to leave their fathers' houses and marry, till an employment of herdsman, dairyman, or something of the kind, became vacant by

[1] Memoires par la Societe Econ. de Berne. Annee 1766, table v. p. 64.

[2] Memoires par la Societe Econ. de Berne. Annee 1776, table i. p.

in Switzerland.

death? And as, from the extreme healthiness of the people, this must happen very slowly, it is evident that the majority of them must wait during a great part of their youth in their bachelor state, or run the most obvious risk of starving themselves and their families. The case is still stronger than in Norway, and receives a particular precision from the circumstance of the births and deaths being so nearly equal.

If a father had unfortunately a larger family than usual, the tendency of it would be rather to decrease than increase the number of marriages. He might perhaps with economy be just able to support them all at home, though he could not probably find adequate employment for them on his small property; but it would evidently be long before they could quit him, and the first marriage among the sons would probably be after the death of the father; whereas, if he had had only two children, one of them might perhaps have married without leaving the parental roof, and the other on the death of the father. It may be said perhaps in general that the absence or presence of four grown up unmarried people, will make the difference of their being room or not, for the establishment of another marriage and a fresh family.

Of the checks to population

As the marriages in this parish would, with few exceptions, be very late, and yet from the extreme healthiness of the situation be very slowly dissolved by the death of either of the parties, it is evident that a very large proportion of the subsisting marriages would be among persons so far advanced in life, that most of the women would have ceased to bear children; and in consequence, the whole number of subsisting marriages was found to be to the number of annual births, in the very unusual proportion of 12 to 1. The births were only about a 49th part of the population; and the number of persons above sixteen was to the number below that age, nearly as 3 to 1.[1]

As a contrast to this parish, and a proof how little the number of births can be depended upon for an estimate of population, M. Muret produces the parish of St. Cergue in the Jura, in which the subsisting marriages were, to the annual births, only in the proportion of 4 to 1, the births were a 26th part of the population, and the number of persons above and below sixteen just equal.[2]

Judging of the population of these parishes from

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, p. 11 and 12.

[2] Ibid.

in Switzerland.

the proportion of their annual births, it would appear, he says, that Leyzin did not exceed St. Cergue by above one fifth at most; whereas, from actual enumeration, the population of the former turned out to be 405, and of the latter only 171.[1]

I have chosen, he observes, the parishes where the contrast is the most striking; but though the difference be not so remarkable in the rest, yet it will always be found true, that from one place to another, even at very small distances, and in situations apparently similar, the proportions will vary considerably.[2]

It is strange, that after making these observations, and others of the same tendency, which I have not produced, he should rest the whole proof of the depopulation of the Pays de Vaud on the proportion of births. There is no good reason for supposing that this proportion should not be different, at different periods, as well as in different situations. The extraordinary contrast in the fecundity of the two parishes of Leyzin and St. Cergue depends upon causes within the power of time and circumstances to alter. From the great

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766. p. 11.

[2] Id. p. 13.

proportion of infants which was found to grow up to maturity in St. Cergue, it appeared that its natural healthiness was not much inferior to that of Leyzin.[1] The proportion of its births to deaths was 7 to 4;[2] but as the whole number of its inhabitants did not exceed 171, it is evident that this great excess of births could not have been regularly added to the population during the last two centuries. It must have arisen therefore, either from a sudden increase of late years in the agriculture or trade of the parish, or from a habit of emigration. The latter supposition I conceive to be the true one, and it seems to be confirmed by the small proportion of adults which has already been noticed. The parish is situated in the Jura, by the side of the high road from Paris to Geneva, a situation which would evidently tend to facilitate emigration; and in effect, it seems to have acted the part of a breeding parish for the towns and flat countries, and the annual drain of a certain portion of the adults made room for all the rest to marry, and to rear a numerous offspring.

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, table xiii. p. 120.

[2] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, table i. p. 11.

in Switzerland.

A habit of emigration in a particular parish will not only depend on situation, but probably often on accident. I have little doubt that three or four very successful emigrations have frequently given a spirit of enterprise to a whole village; and three or four unsuccessful ones a contrary spirit. If a habit of emigration were introduced into the village of Leyzin, it is not to be doubted that the proportion of births would be immediately changed; and at the end of twenty years an examination of its registers might give results as different from those at the time of M. Muret's calculations, as they were then from the contrasted parish of St. Cergue. It will hence appear, that other causes beside a greater mortality will concur to make an estimate of population, at different periods, from the proportion of births, liable to great uncertainty.

The facts which M. Muret has collected are all valuable, though his inferences cannot always be considered in the same light. He made some calculations at Vevey, of a nature really to ascertain the question respecting the fecundity of marriages, and to show the incorrectness of the usual mode of estimating it, though without this particular object in view at the time. He found that

375 mothers had yielded 2093 children, all born alive, from which it followed that each mother had produced 5 $\frac{12}{25}$, or nearly six children.[1] These however were all actually mothers, which every wife is not; but allowing for the usual proportion of barren wives at Vevey, which he had found to be 20 out of 478, it will still appear that the married women one with another produced above 5$\frac{1}{2}$ children.[2] And yet this was in a town, the inhabitants of which he seems to accuse of not entering into the marriage state at the period when nature called them, and when married, of not having all the children which they might have.[3] The general proportion of the annual marriages to the annual births in the Pays de Vaud is as 1 to 3.9,[4] and of course, according to the common mode of

[1] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, p. 29. et seq.

[2] M. Muret does not say whether any of the mothers in this calculation had been married more than once. It is evident that on account of second and third marriages, the fecundity of marriages must always be less than the fecundity of married women. It is probable that the mothers alone are here considered without reference to the number of husbands.

[3] Memoires, &c. par la Societe Econ. de Berne. Annee 1766, p. 32.

[4] Id. table i. p. 21.

in Switzerland.

calculation, the marriages would appear to yield 3.9 children each.

In a division of the Pays de Vaud into eight different districts, M. Muret found, that in seven towns, the mean life was 36 years; and the probability of life, or the age to which half of the born live 37. In 36 villages, the mean life was 37, and the probability of life 42. In nine parishes of the Alps the mean life was 40, and the probability of life 47. In seven parishes of the Jura, these two proportions were 38 and 42: in 12 corn parishes, 37 and 40; in 13 parishes among the great vineyards, 34 and 37: in 6 parishes of mixed vines and hills, $33\frac{9}{10}$ and 36: and in one marshy, 29 and 24.[1]

From another table it appears that the number of persons dying under the age of puberty was less than $\frac{1}{3}$ in the extraordinary parish of Leyzin; and less than $\frac{1}{4}$ in many other parishes of the Alps and the Jura. For the whole of the Pays de Vaud it was about $\frac{1}{3}$.[2]

In some of the largest towns, such as Lausanne

[1] Memoires, &c. par la Societe de Berne. Annee 1766, table viii. p. 92. et seq.

[2] Id. table xiii. p. 120.

and Vevey, on account of the number of strangers above the age of puberty settling in them, the proportion of adults to those under 15 was nearly as great as in the parish of Leyzin, and not far from 3 to 1. In the parishes from which there were not many emigrations, this proportion was about 2 to 1. And in those which furnished inhabitants for other countries, it approached more towards an equality.

The whole population of the Pays de Vaud M. Muret estimated at 113 thousand, of which 76 thousand were adults. The proportion of adults therefore to those under the age of puberty, for the whole country, was 2 to 1. Among these 76 thousand adults, there were 19 thousand subsisting marriages, and consequently 38 thousand married persons; and the same number of persons unmarried, though of the latter number nine thousand, according to M. Muret, would probably be widows or widowers.[1] With such an average store of persons not in the actual state of marriage, amounting to the half of all the adults, there was little ground for apprehension, that any probable

[1] Memoires, &c. par la Societe de Berne. Annee 1766, table xii. p. 27.

in Switzerland.

emigrations or military levies would affect the number of annual marriages, and check the progress of population.

The proportion of annual marriages to inhabitants in the Pays de Vaud, according to M. Muret's tables, was only 1 to 140,[1] which is even less than in Norway.

All these calculations of M. Muret imply the operation of the preventive check to population in a very considerable degree, throughout the whole of the district which he considered; and there is reason to believe that the same habits prevail in other parts of Switzerland, though varying considerably from place to place, according as the situation or the employments of the people render them more or less healthy, or the resources of the country make room or not for an increase.

In the town of Berne, from the year 1583 to 1654, the sovereign council had admitted into the Bourgeoisie 487 families, of which 379 became extinct in the space of two centuries, and in 1783 only 108 of them remained. During the hundred years, from 1684 to 1784, 207 Bernoise families became extinct. From 1624 to 1712, the Bour-

[1] Memoires, &c. par la Societe de Berne. Annee 1766, table i.

geoisie was given to 80 families. In 1623, the sovereign council united the members of 112 different families, of which 58 only remain.[1]

The proportion of unmarried persons in Berne including widows and widowers is considerably above the half of the adults, and the proportion of those below sixteen to those above is nearly as 1 to 3.[2] These are strong proofs of the powerful operation of the preventive check.

The peasants in the canton of Berne have always had the reputation of being rich, and without doubt, it is greatly to be attributed to this cause. A law has for some time prevailed which makes it necessary for every peasant to prove himself in possession of the arms and accoutrements necessary for the militia, before he can obtain permission to marry. This at once excludes the very poorest from marriage; and a very favorable turn may be given to the habits of many others, from a knowledge that they cannot accomplish the object of their wishes without a

[1] Statistique de la Suisse, Durand, tom. iv. p. 405. 8vo. 4 vols. Lausanne, 1796.

[2] Beschreibung von Bern, vol. ii. tab. i. p. 35. 2 vols. 8vo. Bern. 1796.

certain portion of industry and economy. A young man who, with this end in view, had engaged in service, either at home or in a foreign country, when he had gained the necessary sum might feel his pride rather raised, and not be contented merely with what would obtain him permission to marry, but go on till he could obtain something like a provision for a family.

I was much disappointed when in Switzerland, at not being able to procure any details respecting the smaller cantons, but the disturbed state of the country made it impossible. It is to be presumed however, that as they are almost entirely in pasture, they must resemble in a great measure the alpine parishes of the Pays de Vaud in the extraordinary health of the people, and the absolute necessity of the preventive check; except where these circumstances may have been altered by a more than usual habit of emigration, or by the introduction of manufactures.

The limits to the population of a country strictly pastoral are strikingly obvious. There are no grounds less susceptible of improvement than mountainous pastures. They must necessarily be left chiefly to nature; and when they have been

adequately stocked with cattle little more can be done. The great difficulty in these parts of Switzerland as in Norway is to procure a sufficient quantity of fodder for the winter support of the cattle, which have been fed on the mountains in the summer. For this purpose every bit of grass is collected with the greatest care. In places inaccessible to cattle, the peasant sometimes makes hay with crampons on his feeet; grass is cut not three inches high in some places, three times a year; and in the vallies, the fields are seen shaven as close as a bowling-green, and all the inequalities clipped as with a pair of scissors. In Switzerland as in Norway, for the same reasons, the art of mowing seems to be carried to its highest pitch of perfection. As however, the improvement of the lands in the vallies must depend principally upon the manure arising from the stock; it is evident that the quantity of hay and the number of cattle will be mutually limited by each other; and as the population will of course be limited by the produce of the stock, it does not seem possible to increase it beyond a certain point, and that at no great distance. Though the population therefore, in the flat parts of Switzerland, has increased during the last centu-

ry, there is reason to believe that it has been stationary in the mountainous parts. According to M. Muret, it has decreased very considerably in the Alps of the Pays de Vaud; but his proofs of this fact have been noticed as extremely uncertain. It is not probable that the Alps are less stocked with cattle than they were formerly; and if the inhabitants be really rather fewer in number it is probably owing to the smaller proportion of children, and to the improvement which has taken place in the mode of living.

In some of the smaller cantons, manufactures have been introduced, which by furnishing a greater quantity of employment, and at the same time a greater quantity of exports for the purchase of corn, have of course considerably increased their population. But the Swiss writers seem generally to agree, that the districts where they have been established have upon the whole suffered in point of health, morals, and happiness.

It is the nature of pasturage to produce food for a much greater number of people than it can employ. In countries strictly pastoral, therefore, many persons will be idle, or at most be very inadequately occupied. This state of things

naturally disposes to emigration, and has been a chief cause that the Swiss have been so much engaged in foreign service. When a father had more than one son, it would rarely happen that some of the rest did not enrol themselves as soldiers, or emigrate in some other way.

It is possible, though not probable, that a more than usual spirit of emigration, operating upon a country, in which, as it has appeared, the preventive check prevailed to a very considerable degree, might have produced a temporary check to increase at the period when there was such a universal cry about depopulation. If this were so, it without doubt contributed to improve the condition of the lower classes of people. All the foreign travellers in Switzerland, soon after this time, invariably take notice of the state of the Swiss peasantry as superior to that of other countries. In a late excursion to Switzerland, I was rather disappointed not to find it so superior as I had been taught to expect. The greatest part of the unfavorable change might justly be attributed to the losses and sufferings of the people during the late troubles; but a part perhaps to the ill-directed efforts of the different government to increase the population, and to the ultimate consequences even of efforts well direct-

ed, and for a time calculated to advance the comforts and happiness of the people.

I was very much struck with an effect of this last kind, in an expedition to the *Lac de Joux* in the Jura. The party had scarcely arrived at a little inn at the end of the lake, when the mistress of the house began to complain of the poverty and misery of all the parishes in the neighborhood. She said that the country produced little, and yet was full of inhabitants; that boys and girls were marrying who ought still to be at school; and that, while this habit of early marriages continued they should always be wretched, and distressed for subsistence.

The peasant, who afterwards conducted us to the source of the Orbe, entered more fully into the subject, and appeared to understand the principle of population almost as well as any man I ever met with. He said, that the women were prolific, and the air of the mountains so pure and healthy that very few children died, except from the consequences of absolute want; that the soil being barren was inadequate to yield employment and food for the numbers that were yearly growing up to manhood; that the wages of labor were conse-

quently very low, and totally insufficient for the decent support of a family; but that the misery and starving condition of the greater part of the society did not operate properly as a warning to others, who still continued to marry and to produce a numerous offspring which they could not support. This habit of early marriages might really, he said, be called *le vice du pays;* and he was so strongly impressed with the necessary and unavoidable wretchedness that must result from it, that he thought a law ought to be made restricting men from entering into the marriage state before they were forty years of age, and then allowing it only with "*des vielles filles,*" who might bear them two or three children instead of six or eight.

I could not help being diverted with the earnestness of his oratory on this subject, and particularly with his concluding proposition. He must have seen and felt the misery arising from a redundant population most forcibly to have proposed so violent a remedy. I found upon inquiry, that he had himself married very young.

The only point in which he failed, as to his philosophical knowledge of the subject, was in confining his reasonings too much to barren and mountainous countries, and not extending them into the

in Switzerland.

plains. In fertile situations he thought perhaps, that the plenty of corn and employment might remove the difficulty, and allow of early marriages. Not having lived much in the plains, it was natural for him to fall into this error; particularly as in such situations the difficulty is not only more concealed from the extensiveness of the subject; but is in reality less, from the greater mortality naturally occasioned by low grounds, towns, and manufactories.

On inquiring into the principal cause of what he had named the *predominant vice* of his country, he explained it with great philosophical precision. He said that a manufacture for the polishing of stones had been established some years ago, which for a time had been in a very thriving state, and had furnished high wages and employment to all the neighborhood; that the facility of providing for a family, and of finding early employment for children, had encouraged to a great degree early marriages; and that the same habit had continued, when from a change of fashion, accident, and other causes, the manufacture was almost at an end. Very great emigrations, he said, had of late years taken place, but the breeding system went on so fast, that they were not sufficient to relieve the

country of its superabundant mouths, and the effect was such as he had described to me, and as I had in part seen.

In other conversations which I had with the lower classes of people in different parts of Switzerland and Savoy, I found many who, though not sufficiently skilled in the principle of population, to see its effects on society like my friend of the *Lac de Joux*, yet saw them clearly enough as affecting their own individual interests, and were perfectly aware of the evils which they should probably bring upon themselves by marrying before they could have a tolerable prospect of being able to maintain a family. From the general ideas which I found to prevail on these subjects, I should by no means say that it would be a difficult task to make the common people comprehend the principle of population, and its effect in producing low wages and poverty.

Though there is no absolute provision for the poor in Switzerland, yet each parish generally possesses some seigneural rights and property in land for the public use, and is expected to maintain its own poor. These funds, however, being limited will of course often be totally insufficient, and occasionally voluntary collections are made for this purpose. But the whole of the supply being com-

paratively scanty and uncertain, has not the same bad effect as the parish rates of England. Of late years much of the common lands belonging to parishes has been parcelled out to individuals, which has of course tended to improve the soil and increase the number of people; but from the manner in which it has been conducted, it has operated perhaps too much as a systematic encouragement of marriage; and has contributed to increase the number of poor. In the neighborhood of the richest *communes*, I often observed the greatest quantity of beggars.

There is reason to believe however, that the efforts of the Economical Society of Berne to promote agriculture were crowned with some success, and that the increasing resources of the country have made room for an additional population, and furnished an adequate support for the greatest part if not the whole of that increase which has of late taken place.

In 1764 the population of the whole canton of Berne, including the Pays de Vaud, was estimated at 336,689. In 1791, it had increased to 414,420. From 1764 to 1777, its increase proceeded at the rate of 2,000 each year; and, from 1778 to 1791, at the rate of 3,109 each year.[1]

[1] Beschreibung von Bern, vol. ii. p. 40.

CHAPTER VI.

Of the Checks to Population in France.

AS the parochial registers in France, before the revolution, were not kept with peculiar care, nor for any great length of time, and as the few which have been produced exhibit no very extraordinary results, I should not have made this country the subject of a distinct chapter, but for a circumstance attending the revolution which has excited considerable surprise. This is, the undiminished state of the population in spite of the losses sustained during so long and destructive a contest.

A great national work founded on the reports of the prefects in the different departments, is at present in some state of forwardness at Paris, and when completed it may reasonably be expected to form a very valuable accession to the materials of statistical science in general. The returns of all the prefects are not however yet complete: but I was positively assured by the person who has the principal superintendence of them, that enough is

already known to be certain, that the population of the old territory of France has rather increased than diminished during the revolution.

Such an event, if true, very strongly confirms the general principles of this work; and assuming it for the present as a fact, it may tend to throw some light on the subject, to trace a little in detail the manner in which such an event might happen.

In every country there is always a considerable body of unmarried persons, formed by the gradual accumulation of the excess of the number rising annually to the age of puberty, above the number of persons annually married. The stop to the further accumulation of this body is when its number is such, that the yearly mortality equals the yearly accessions that are made to it. In the Pays de Vaud, as appeared in the last chapter, this body, including widows and widowers, persons who are not actually in the state of marriage, equals the whole number of married persons. But in a country like France, where both the mortality, and the tendency to marriage are much greater than in Switzerland, this body does not bear so large a proportion to the population.

According to a calculation in an *Essai d' une*

Statistique Générale, published at Paris in 1800, by M. Peuchet, the number of unmarried males in France between 18 and 50 is estimated at 1,451,063, and the number of males, whether married or not, between the same ages, at 5,000,000.[1] It does not appear at what period exactly this calculation was made. The number of unmarried persons seems to be too great for any period after some years of the revolution had elapsed; and rather too small for the period before the revolution. Let us suppose however that this number of 1,451,063 expresses the collective body of unmarried males of a military age at the commencement of the revolution.

The population of France, before the beginning of the war, was estimated by the Constituent Assembly, at 26,363,074;[2] and there is no reason to believe that this calculation was too high. Necker, though he mentions the number 24,800,000, expresses his firm belief that the yearly births at that time amounted to above a million, and consequently, according to his multiplier of

[1] Page 32. 8vo. 78 pages.

[2] A. Young's Travels in France, vol. i. c. xvii. p. 466. 4to. 1792.

in France.

25¾, that the whole population was nearly 26 millions;[1] and this calculation was made ten years previous to the estimate of the Constituent Assembly.

Taking then the annual births at rather above a million, and estimating that rather above $\frac{2}{3}$ would die under 18, which appears to be the case from some calculations of M. Peuchet,[2] it will follow, that about 600,000 persons will annually arrive at the age of 18.

The annual marriages, according to Necker, are 213,774;[3] but as this number is an average of ten years, taken while the population was increasing, it is probably too low. If we take 220,000, then 440,000 persons will be supposed to marry out of the 600,000 rising to a marriageable age; and consequently, the excess of those rising to the age of 18, above the number wanted to complete the usual proportion of annual marriages, will be 160,000, or 80,000 males. It is evident therefore, that the accumulated body of 1,451,063, unmar-

[1] De l'Administration des Finances, tom. i. c. ix. p. 256. 12mo. 1785.

[2] Essai, p. 31.

[3] De l'Administration des Finances, tom. i. c. ix. p. 255.

ried males, of a military age, and the annual supply of 80,000 youths of 18, might be taken for the service of the state, without affecting in any degree the number of annual marriages. But we cannot suppose that the 1,451,063 should be taken all at once, and many soldiers are married, and in a situation not to be entirely useless to the population. Let us suppose 600,000 of the corps of unmarried males to be embodied at once; and this number to be kept up by the annual supply of 150,000 persons, taken partly from the 80,000, rising annually to the age of 18, and not wanted to complete the number of annual marriages, and partly from the 851,063 remaining of the body of unmarried males which existed at the beginning of the war.

It is evident that from these two sources, 150,000 might be supplied each year, for ten years, and yet allow of an increase in the usual number of annual marriages of above 10,000. It is true that in the course of the ten years, many of the original body of unmarried males will have passed the military age; but this will be balanced, and indeed much more than balanced, by their utility in the married life. From the beginning, it should be taken into consideration, that though a man of

in France.

fifty be generally considerd as past the military age, yet if he marry a fruitful subject, he may by no means be useless to the population; and in fact the supply of 150,000 recruits each year would be taken principally from the 300,000 males rising annually to 18, and the annual marriages would be supplied in great measure from the remaining part of the original body of unmarried persons. Widowers and bachelors of forty and fifty, who in the common state of things might have found it difficult to obtain an agreeable partner, would probably see these difficulties removed in such a scarcity of husbands; and the absence of 600,000 persons would of course make room for a very considerable addition to the number of annual marriages. This addition in all probability took place. Many, among the remaining part of the original body of bachelors, who might otherwise have continued single, would marry under this change of circumstances; and it is known that a very considerable proportion of youths under 18, in order to avoid the military conscriptions, entered prematurely into the married state. This was so much the case, and contributed so much to diminish the number of unmarried persons, that in the beginning of the year 1798, it was found ne-

cessary to repeal the law, which had exempted married persons from the conscriptions; and those who married subsequently to this new regulation were taken indiscriminately with the unmarried. And though after this, the levies fell in part upon those who were actually engaged in the peopling of the country; yet the number of marriages untouched by these levies might still remain greater than the usual number of marriages before the revolution: and the marriages which were broken by the removal of the husband to the armies would not probably have been entirely barren.

Sir Francis d'Ivernois, who had certainly a tendency to exaggerate, and probably has exaggerated considerably, the losses of the French nation, estimates the total loss of the troops of France both by land and sea, up to the year 1799, at a million and a half.[1] The round numbers which I have

[1] Tableau des Pertes, &c. c. ii. p. 7. Mons. Garnier, in the notes to his edition of Adam Smith, calculates that only about a sixtieth part of the French population was destroyed in the armies. He supposes only 500,000 embodied at once, and that this number was supplied by 400,000 more in the course of the war; and allowing for the number which would die naturally, that the additional mortality occasioned by the war was only about 45,000 each year. Tom. v. note xxx. p. 284. If the actual loss

in France.

allowed, for the sake of illustrating the subject, exceed Sir Francis d'Ivernois' estimate by six hundred thousand. He calculates however a loss of a million of persons more, from the other causes of destruction attendant on the revolution; but as this loss fell indiscriminately on all ages and both sexes, it would not affect the population in the same degree, and will be much more than covered by the 600,000 men in the full vigor of life, which remain above Sir Francis' calculation. It should be observed also, that in the latter part of the revolutionary war, the military conscriptions were probably enforced with still more severity in the newly acquired territories than in the old state; and as the population of these new acquisitions is estimated at 5 or 6 millions, it would bear a considerable proportion of the million and a half supposed to be destroyed in the armies. And although the law which facilitated divorces to so great a degree be radically bad both in a moral and political view, yet under the circumstance of a great scarcity of men, it would operate a little like the custom of

were no more than these statements make it, a small increase of births would have easily repaired it; but I should think that these estimates are probably as much below the truth as Sir F. d'Ivernois' are above.

polygamy, and increase the number of children in proportion to the number of husbands. In addition to this, the women without husbands do not appear all to have been barren, as the proportion of illegitimate births is now raised to $\frac{1}{11}$ of the whole number of births, from $\frac{1}{17}$[1] which it was before the revolution; and though this be a melancholy proof of the depravation of morals, yet it would certainly contribute to increase the number of births; and as the female peasants in France were enabled to earn more than usual during the revolution, on account of the scarcity of hands, it is probable that a considerable portion of these children would survive.

Under all these circumstances, it cannot appear impossible, and scarcely even improbable, that the population of France should remain undiminished, in spite of all the causes of destruction which have operated upon it during the course of the revolution, provided that the agriculture of the country has been such as to continue the means of subsistence unimpaired. And it seems now to be generally acknowledged that however severely the manufactures of France may have

[1] Essai de Peuchet, p. 28.

in France.

suffered, her agriculture has increased rather than diminished. At no period of the war can we suppose that the number of embodied troops exceeded the number of men employed before the revolution in manufactures. Those who were thrown out of work by the destruction of these manufactures, and who did not go to the armies, would of course betake themselves to the labors of agriculture; and it was always the custom in France for the women to work much in the fields, which custom was probably increased during the revolution. At the same time the absence of a large portion of the best and most vigorous hands would raise the price of labor; and as from the new land brought into cultivation, and the absence of a considerable part of the greatest consumers[1] in foreign countries, the price of provisions did not rise in proportion, this advance in the price of labor would not only operate as a powerful encouragement to marriage, but would enable the pea-

[1] Supposing the increased number of children at any period to equal the number of men absent in the armies, yet these children being all very young, could not be supposed to consume a quantity equal to that which would be consumed by the same number of grown up persons.

sants to live better, and to rear a greater number of their children.

At all times, the number of small farmers and proprietors in France was great; and though such a state of things is by no means favorable to the clear surplus produce, or disposable wealth of a nation; yet sometimes it is not unfavorable to the absolute produce, and it has always a most powerful tendency to encourage population. From the sale and division of many of the large domains of the nobles and clergy, the number of landed proprietors has considerably increased during the revolution; and as a part of these domains consisted of parks and chaces, new territory has been given to the plough. It is true that the land tax has been not only too heavy, but injudiciously imposed. It is probable however, that this disadvantage has been nearly counterbalanced by the removal of the former oppressions under which the cultivator labored, and that the sale and division of the great domains may be considered as a clear advantage on the side of agriculture, or at any rate of the gross produce, which is the principal point with regard to mere population.

These considerations make it appear probable, that the means of subsistence have at least remained unimpaired, if they have not increased during

in France.

the revolution; and a view of the cultivation of France in its present state certainly rather tends to confirm this supposition.

We shall not therefore be inclined to agree with Sir Francis d'Ivernois in his conjecture, that the annual births in France have diminished by one seventh during the revolution.[1] On the contrary, it is much more probable that they have increased by this number. The average proportion of births to the population in all France, before the revolution, was according to Necker as 1 to 25¾.[2] It has appeared in the reports of some of the prefects which have been returned, that the proportion in many country places was raised to 1 to 21, 22, 22½, and 23;[3] and though these proportions might, in some degree, be caused by the absence of a part of the population in the armies, yet I have little doubt that they are principally to be attributed to the birth of a greater number of children than usual. If when the reports of all the prefects are put together, it should appear that the number of births has not increased in proportion to the population and, yet that the population is undiminished; it will follow,

[1] Tableau des Pertes, &c. c. ii. p. 14.

[2] De l'Administration des Finances, tom. i. c. ix. p. 254.

[3] Essai de Peuchet, p. 28.

either that Necker's multiplier for the births was too small, which is extremely probable, as from this cause he appears to have calculated the population too low; or that the mortality among those not exposed to violent deaths has been less than usual, which from the high price of labor, and the desertion of the towns for the country, is not unlikely.

According to Necker and Moheau, the mortality in France, before the revolution, was 1 in 30 or 30½.[1] Considering that the proportion of the population which lives in the country is to that in the towns as 3½ to 1,[2] this mortality is extraordinarily great, caused probably by the misery arising from an excess of population; and from the remarks of Arthur Young on the state of the peasantry in France,[3] which are completely sanctioned by Necker,[4] this appears to have been really the case. If we suppose that from the removal of a

[1] De l'Administration des Finances, tom. i. c. ix. p. 255. Essai de Peuchet, p. 29.

[2] Young's Travels in France, vol. i. c. xvii. p. 466.

[3] See generally, c. xvii. vol. i. and the just observations on these subjects, interspersed in many other parts of his very valuable tour.

[4] De l'Administration des Finances, tom. i. c. ix. p. 262, et seq.

in France.

part of this redundant population the mortality should have decreased from 1 in 30 to 1 in 35, this favorable change would go a considerable way in repairing the breaches made by war on the frontiers.

The probability is, that both the causes mentioned have operated in part. The births have increased, and the deaths of those remaining in the country have diminished; so that putting the two circumstances together, it will probably appear, when the results of all the reports of the prefects are known, that including those who have fallen in the armies and by violent means, the deaths have not exceeded the births in the course of the revolution.

The returns of the prefects are to be given for the year 9 of the republic, and to be compared with the year 1789; but if the proportion of births to the population be given merely for the individual year 9, it will not show with precision the average proportion of births to the population during the course of the revolution. In the confusion occasioned by this event, it is not probable that any very exact registers should have been kept; but from theory I should be inclined to expect, that soon after the beginning of the war, and at other

periods during the course of it, the proportion of births to the whole population would be greater than in 1800 and 1801.[1] If it should appear by

[1] In the *Statistique Générale et Particulière de la France, et de ses Colonies*, lately published, the returns of the prefects for the year IX are given, and seem to justify this conjecture. The births are 955,430, the deaths 821,871, and the marriages 202,177. These numbers hardly equal Necker's estimates; and yet all the calculations in this work, both with respect to the whole population and its proportion to a square league, make the old territory of France more populous now than at the beginning of the revolution. The estimate of the population at the period of the Constituent Assembly has already been mentioned, and at this time the number of persons to a square league was reckoned 996. In the year VI of the republic, the result of the Bureau de Cadastre gave a population of 26,048,254, and the number to a square league 1,020. In the year VII Dépère calculated the whole population of France at 33,501,094, of which 28,810,694 belonged to ancient France; the number to a square league 1,101. In the years IX and X the addition of Piedmont and the isle of Elba raised the whole population to 34,376,313, and nearly the same number as in the year VII was supposed to belong to ancient France; the number to a square league 1,036.

In the face of these calculations, the author takes a lower multiplier than Necker for the births, observing that though Necker's proportions remained true in the towns, yet that in the country the proportion of births had increased to $\frac{1}{21}$, $\frac{1}{22}$, $\frac{1}{22\frac{1}{2}}$, $\frac{1}{23}$, which he attributes to the premature marriages to avoid the military levies; and on the whole concludes with mentioning 25 as the

in France.

the returns that the number of annual marriages has not increased during the revolution, the circumstance will be obviously accounted for by the

---

proper multiplier. And yet if we make use of this multiplier, we shall get a population under 25 millions, instead of 28 millions. It is true indeed, that no just inferences can be drawn from the births of a single year, but as these are the only births referred to, the contradiction is obvious. Perhaps the future returns may solve the difficulty, and the births in the following years be greater; but I am inclined to think, as I have mentioned in the text, that the greatest increase in the proportion of births was before the year IX, and probably during the first six or seven years of the republic, while married persons were exempt from the military conscriptions. If the state of the agricultural part of the nation has been improved by the revolution, I am strongly inclined to believe that the proportions both of births and deaths will be found to diminish. In so fine a climate as France nothing but the very great misery of the lower classes could occasion a mortality of $\frac{1}{30}$, and a proportion of births as $_{25}^{1}\,\frac{3}{4}$, according to Necker's calculations. And consequently upon this supposition the births for the year IX may not be incorrect, and in future the births and deaths may not bear so large a proportion to the population. The contrast between France and England in this respect is quite wonderful.

The part of this work relating to population is not drawn up with much knowledge of the subject. One remark is very curious. It is observed that the proportion of marriages to the population is as 1 to 110, and of births as 1 to 25, from which it is inferred that one fourth of the

extraordinary increase in the illegitimate births, mentioned before in this chapter, which amount at present to one eleventh of all the births, instead of one forty-seventh, according to the calculation of Necker before the revolution.[1]

---

born live to marry. If this inference were just, France would soon be depopulated.

In calculating the value of lives, the author makes use of Buffon's tables, which are entirely incorrect, being founded principally on registers taken from the villages round Paris. They make the probability of life at birth only a little above eight years, which taking the towns and the country together is very far short of the just average.

Scarcely any thing worth noticing has been added in this work to the details given in the essay of Peuchet, which I have already frequently referred to. On the whole I have not seen sufficient grounds to make me alter any of my conjectures in this chapter, though probably they are not all well-founded. Indeed, in adopting Sir F. d'Ivernois' calculations respecting the actual loss of men during the revolution, I never thought myself borne out by facts; but the reader will be aware that I adopted them rather for the sake of illustration than from supposing them strictly true.

[1] Essai de Peuchet, p. 28. It is highly probable that this increase of illegitimate births occasioned a more than usual number of children to be exposed in those dreadful receptacles, *Les Hopitaux des Enfans trouvés*, as noticed by Sir Francis d'Ivernois; but probably this cruel custom was confined to particular districts, and the number exposed, upon the whole, might bear no great proportion to the sum of all the births.

in France.

Sir Francis d'Ivernois observes, that "those "have yet to learn the first principles of political "arithmetic, who imagine that it is in the field "of battle and the hospitals, that an account can "be taken of the lives which a revolution or a "war has cost. The number of men it has kil- "led is of much less importance than the number "of children which it has prevented, and will still "prevent, from coming into the world. This is "the deepest wound which the population of "France has received."—"Supposing," he says, "that, of the whole number of men destroyed, on- "ly two millions had been united to as many fe- "males; according to the calculation of Buffon, "these two millions of couples ought to bring in- "to the world twelve millions of children, in or- "der to supply, at the age of thirty-nine, a number "equal to that of their parents. This is a point "of view in which the consequences of such a "destruction of men becomes almost incalculable: "because they have much more effect with regard "to the twelve millions of children, which they "prevent from coming into existence, than with "regard to the actual loss of the two millions and "a half of men, for whom France mourns. It is

" not till a future period that she will be able to " estimate this dreadful breach."[1]

And yet if the circumstances on which the foregoing reasonings are founded should turn out to be true, it will appear that France has not lost a single birth by the revolution. She has the most just reason to mourn the two millions and a half of individuals which she may have lost, but not their posterity: because, if these individuals had remained in the country, a proportionate number of children born of other parents, which are now living in France, would not have come into existence. If in the best governed country in Europe we were to mourn the posterity which is prevented from coming into being, we should always wear the habit of grief.

It is evident that the constant tendency of the births in every country to supply the vacancies made by death cannot, in a moral point of view, afford the slightest shadow of excuse for the wanton sacrifice of men. The positive evil that is committed in this case, the pain, misery, and wide spreading desolation and sorrow, that are occasioned to the existing inhabitants, can by no means be

[1] Tableau des Pertes, &c. c. ii. p. 13, 14.

in France.

counterbalanced by the consideration that the numerical breach in the population will be rapidly repaired. We can have no other right, moral or political, except that of the most urgent necessity, to exchange the lives of beings in the full vigor of their enjoyments, for an equal number of helpless infants.

It should also be remarked, that though the numerical population of France may not have suffered by the revolution; yet that, if her losses have been in any degree equal to the conjectures on the subject, her military strength cannot be unimpaired. Her population at present must consist of a much greater proportion than usual of women and children; and the body of unmarried persons of a military age must be diminished in a very striking manner. This indeed is known to be the case, from the returns of the prefects which have already been received.

It has appeared, that the point at which the drains of men will begin essentially to affect the population of a country is when the original body of unmarried persons is exhausted, and the annual demands are greater than the excess of the number of males rising annually to the age of puberty, above the number wanted to complete the

usual proportion of annual marriages. France was probably at some distance from this point at the conclusion of the war; but in the present state of her population, with an increased proportion of women and children, and a great diminution of males of a military age, she could not make the same gigantic exertions which were made at one period, without trenching on the sources of her population.

At all times the number of males of a military age in France was small in proportion to the population, on account of the tendency to marriage,[1] and the great number of children. Necker takes particular notice of this circumstance. He observes that the effect of the very great misery of the peasantry is to produce a dreadful mortality of infants under three or four years of age; and the consequence is, that the number of young children will always be in too great a proportion to the number of grown up people. A million of individuals, he justly observes, will in this case neither present the same military force, nor the same ca-

[1] The proportion of marriages to the population in France, according to Necker, is 1 to 113, tom. i. c. ix. p. 255.

in France.

pacity of labor, as an equal number of individuals in a country where the people are less miserable.[1]

Switzerland, before the revolution, could have brought into the field, or have employed in labor appropriate to grown up persons, one third more in proportion to her population, than France at the same period.

It will be but of little consequence, if any of the facts or calculations which have been assumed in the course of this chapter should turn out to be false. The reader will see, that reasonings are of a general nature, and may be true, though the facts taken to illustrate them may prove to be inapplicable.[1]

---

[1] De l'Administration des Finances, tom. i. c. ix. p. 263.

[2] Since I wrote this chapter I have had an opportunity of seeing the *Analyse des Procès Verbaux des Conseils Généreaux de Département*, which gives a very particular and highly curious account of the internal state of France for the year 8. With respect to the population, out of 69 departments, the reports from which are given, in 16 the population is supposed to be increased; in 42 diminished; in 9 stationary; and in 2 the active population is said to be diminished, but the numerical to remain the same. It appears however that most of these reports are not founded on actual enumerations; and without such positive data, the prevailing opinions on the subject

of population, together with the necessary and universally acknowledged fact of a very considerable diminution in the males of a military age, would naturally dispose people to think that the numbers upon the whole must be diminished. Judging merely from appearances, the substitution of a hundred children for a hundred grown up persons, would certainly not produce the same impression with regard to population. I should not be surprised therefore if when the enumerations for the year 9 are completed, it should appear that the population upon the whole, has not diminished. In some of the reports, *l'aisance générale répandue sur le peuple*, and *la division des grands propriétés*, are mentioned as the causes of increase; and almost universally, *les mariages, prématurés*, and *les mariages multipliés par la crainte des loix militaires*, are particularly noticed.

With respect to the state of agriculture, out of 78 reports 6 are of opinion that it is improved; 10, that it is deteriorated; 70 demand that it should be encouraged in general; 32 complain *de la multiplicité des defrichements*; and 12 demand *des encouragements pour les défrichements*. One of the reports mentions, *la quantité prodigieuse de terres vagues mise en culture depuis quelque tems, et les travaux multipliées, au de la de ce que peuvent exécuter les bras employés en agriculture*; and others speak of *les défrichements multipliées qui ont eu lieu depuis plusieurs années*, which appeared to be successful at first; but it was soon perceived that it would be more profitable to cultivate less, and cultivate well. Many of the reports notice the cheapness of corn, and the want of sufficient vent for this commodity; and in the discussion of the question respecting the division of the *biens communaux*, it is observed that "le partage en opérant le défrichement de "ces biens, a sans doute produit une augmentation reelle "de denrées, mais d'un autre côté, les vaines pâtures

in France.

" n'existent plus, et les bestiaux sont peutêtre diminués." On the whole therefore I should be inclined to infer, that though the agriculture of the country does not appear to have been conducted judiciously, so as to obtain a large *surplus* produce, yet that the *absolute* produce had by no means been diminished during the revolution, and that the attempt to bring so much new land under cultivation had contributed to make the scarcity of laborers still more sensible. And if it be allowed that the food of the country did not decrease during the revolution, the high price of labor, which is very generally noticed, must have operated as a most powerful encouragement to population among the laboring part of the society.

The land tax, or *contribution foncière*, is universally complained of; indeed it appears to be extremely heavy, and to fall very unequally. It was intended to be only a fifth of the net produce; but from the unimproved state of agriculture in general, the number of small proprietors, and particularly the attempt to cultivate too much surface in proportion to the capital employed, it often amounts to a fourth, a third, or even a half. The state of agriculture in France has never been such as to yield a surplus produce in proportion to the gross produce in any respect equal to what it yields in England; and therefore a land tax bearing the same relation to the gross produce would cause a very different degree of pressure in the two countries. And when property is so much divided that the rent and profit of a farm must be combined in order to support a family upon it, a land tax must necessarily greatly impede cultivation; though it has little or no effect of this kind when farms are large, and let out to tenants, as is most frequently the case in England. Among the impediments to agriculture mentioned in the reports, the too great division of lands from the new laws of succession is noticed. The parti-

tion of some of the great domains would probably contribute to the improvement of agriculture ; but subdivisions of the nature here alluded to would certainly have a contrary effect and would tend most particularly to diminish surplus produce, and make a land tax both oppressive and unproductive. If all the land in England were divided into farms of 20l. a year, we should probably be more populous than we are at present; but as a nation we should be extremely poor. We should be almost without disposable revenue, and should be under a total inability of maintaining the same number of manufactures, or collecting the same taxes as at present. All the departments demand a diminution of the *contribution foncière* as absolutely necessary to the prosperity of agriculture.

Of the state of the hospitals and charitable establishments, of the prevalence of beggary, and the mortality among the exposed children, a most deplorable picture is drawn in almost all the reports. From which we should at first be disposed to infer a greater degree of poverty and misery among all the lower classes of people in general. It appears however that the hospitals and charitable establishments lost almost the whole of their revenues during the revolution; and this sudden subtraction of support from a great number of people who had no other reliance, together with the known failure of manufactures in the towns, and the very great increase of illegitimate children, might produce all the distressing appearances described in the reports, without impeaching the great fact of the meliorated condition of agricultural laborers in general, necessarily arising from the acknowledged high price of labor, and comparative cheapness of corn ; and it is from this part of the society that the effective population of a country is principally supplied. If the poor's rates of England were suddenly abolished there would undoubtedly be the most complicated distress among those

in France.

who were before supported by them; but I should not expect that either the condition of the laboring part of the society in general, or the population of the country would suffer from it. As the proportion of illegitimate children in France has risen so extraordinarily, as from $\frac{1}{47}$ of all the births to $\frac{1}{11}$, it is evident that more might be abandoned in hospitals, and more out of these die than usual, and yet a more than usual number be reared at home, and escape the mortality of these dreadful receptacles. It appears that from the low state of the funds in the hospitals, the proper nurses could not be paid, and numbers of children died from absolute famine. Some of the hospitals at last very properly refused to receive any more.

The reports, upon the whole, do not present a favorable picture of the internal state of France; but something is undoubtedly to be attributed to the nature of these reports, which consisting as they do of observations explaining the state of the different departments, and of particular demands with a view to obtain assistance or relief from government, it is to be expected that they should lean rather to the unfavorable side. When the question is respecting the imposition of new taxes, or the relief from old ones, people will generally complain of their poverty. On the subject of taxes indeed, it would appear as if the French government must be a little puzzled. For though it very properly recommended to the *conseils généraux* not to indulge in vague complaints, but to mention specific grievances, and propose specific remedies, and particularly not to advise the abolition of one tax without suggesting another; yet all the taxes appear to me to be reprobated, and most frequently in general terms, without the proposal of any substitute. *La contribution foncière*, *la taxe mobiliaire*, *les barrières*, *les droits de douane*, all excite bitter complaints, and the only new substitute that struck me was a tax upon game. which being at present almost

extinct in France, cannot be expected to yield a revenue sufficient to balance all the rest. The work, upon the whole, is extremely curious, and as showing the wish of the government to know the state of each department, and to listen to every observation and proposal for its improvement, is highly creditable to the ruling power. It was published for a short time, but the circulation of it was soon stopped, and confined to the ministers, *les conseils généraux*, &c. Indeed the documents are evidently more of a private than of a public nature, and certainly have not the air of being intended for general circulation.

For the state of population in Spain, I refer the reader to the valuable and entertaining travels of Mr. Townsend in that country, in which he will often find the principle of population very happily illustrated. I should have made it the subject of a distinct chapter, but was fearful of extending this part of the work too much, and of falling almost unavoidably into too many repetitions, from the necessity of drawing the same kind of inference from so many different countries. I could expect besides, to add very little to what has been so well done by Mr. Townsend.

CHAPTER VII.

Of the Checks to Population in England.

THE most cursory view of society in this country must convince us, that throughout all ranks the preventive check to population prevails in a considerable degree. Those among the higher classes who live principally in towns, often want the inclination to marry, from the facility with which they can indulge themselves in an illicit intercourse with the sex. And others are deterred from marrying by the idea of the expenses that they must retrench, and the pleasures of which they must deprive themselves, on the supposition of having a family. When the fortune is large these considerations are certainly trivial; but a preventive foresight of this kind has objects of much greater weight for its contemplation as we go lower.

A man of liberal education, with an income only just sufficient to enable him to associate in the rank of gentlemen, must feel absolutely certain that if he marry and have a family, he shall

be obliged, if he mix in society, to rank himself with farmers and tradesmen. The woman that a man of education would naturally make the object of his choice is one brought up in the same habits and sentiments with himself, and used to the familiar intercourse of a society totally different from that to which she must be reduced by marriage. Can a man easily consent to place the object of his affection in a situation so discordant, probably, to her habits and inclinations? Two or three steps of descent in society, particularly at this round of the ladder, where education ends and ignorance begins, will not be considered by the generality of people as a chimerical but a real evil. If society be desirable, it surely must be free, equal, and reciprocal society, where benefits are conferred as well as received, and not such as the dependent finds with his patron, or the poor with the rich.

These considerations certainly prevent many in this rank of life from following the bent of their inclinations in an early attachment. Others, influenced either by a stronger passion or a weaker judgment, disregard these considerations; and it would be hard indeed if the gratification of so delightful a passion as virtuous love did not some-

times more than counterbalance all its attendant evils. But I fear it must be acknowledged, that the more general consequences of such marriages are rather calculated to justify than to disappoint the forebodings of the prudent.

The sons of tradesmen and farmers are exhorted not to marry, and generally find it necessary to comply with this advice, till they are settled in some business or farm, which may enable them to support a family. These events may not perhaps occur till they are far advanced in life. The scarcity of farms is a very general complaint; and the competition in every kind of business is so great, that it is not possible that all should be successful. Among the clerks in counting houses, and the competitors for all kinds of mercantile and professional employment, it is probable that the preventive check to population prevails more than in any other department of society.

The laborer who earns eighteen-pence or two shillings a day, and lives at his ease as a single man, will hesitate a little before he divides that pittance among four or five, which seems to be not more than sufficient for one. Harder fare and harder labor he would perhaps be willing to submit to for the sake of living with the woman that

he loves; but he must feel conscious, that should he have a large family, and any ill fortune whatever, no degree of frugality, no possible exertion of his manual strength, would preserve him from the heart-rending sensation of seeing his children starve, or of being obliged to the parish for their support. The love of independence is a sentiment that surely none would wish to see eradicated; though the parish law of England, it must be confessed, is a system of all others the most calculated gradually to weaken this sentiment, and in the end will probably destroy it completely.

The servants who live in the families of the rich have restraints yet stronger to break through in venturing upon marriage. They possess the necessaries, and even the comforts of life, almost in as great plenty as their masters. Their work is easy and their food luxurious, compared with the work and food of the class of laborers; and their sense of dependence is weakened by the conscious power of changing their masters if they feel themselves offended. Thus comfortably situated at present, what are their prospects if they marry? Without knowledge or capital, either for business or farming, and unused and therefore unable to earn a subsistence by daily labor, their only

in England.

refuge seems to be a miserable ale-house, which certainly offers no very enchanting prospect of a happy evening to their lives. The greater number of them therefore, deterred by this uninviting view of their future situation, content themselves with remaining single where they are.

If this sketch of the state of society in England be near the truth, it will be allowed that the preventive check to population operates with considerable force throughout all the classes of the community. And this observation is further confirmed by the abstracts from the registers returned in consequence of the late Population Act. The results of these abstracts show, that the annual marriages in England and Wales are to the whole population as 1 to $123\frac{1}{3}$,[1] a smaller proportion of marriages than obtains in any of the countries

[1] Observ. on the Results of the Population Act, p. 11. The answers to the Population Act have at length happily rescued the question of the population of this country from the obscurity in which it has been so long involved, and have afforded some very valuable data to the political calculator. At the same time it must be confessed, that they are not so complete, as entirely to exclude reasonings and conjectures respecting the inferences which are to be drawn from them. It is earnestly to be hoped that the subject may not be suffered to drop after the present ef-

which have been examined, except Norway and Switzerland.

In the earlier part of the last century, Dr. Short estimated this proportion at about 1 to 115.[1] It is probable that this calculation was then correct, and the present diminution in the proportion of marriages notwithstanding an increase of population more rapid than formerly, owing to the more rapid progress of commerce and agriculture, is partly a cause, and partly a consequence of the diminished mortality that has been observed of late years.

The returns of the marriages, pursuant to the late act, are supposed to be less liable to the suspicion of inaccuracy than any other parts of the registers.

Dr. Short in his *New Observations on Town and Country Bills of Mortality* says, he will "conclude

---

fort. Now that the first difficulty is removed, an enumeration every ten years might be rendered easy and familiar; and the registers of births, deaths, and marriages, might be received every year, or at least every five years. I am persuaded that more inferences are to be drawn, respecting the internal state of a country, from such registers, than we have yet been in the habit of supposing.

[1] New Observ. on Bills of Mortality, p. 265. 8vo. 1750.

" with the observation of an eminent judge of " this nation, that the growth and increase of " mankind is more stinted from the cautious dif- " ficulty people make to enter on marriage, from " the prospect of the trouble and expenses in pro- " viding for a family, than from any thing in the " nature of the species." And, in conformity to this idea, Dr. Short proposes to lay heavy taxes and fines on those who live single, for the support of the married poor.[1]

The observation of the eminent judge is, with regard to the numbers which are prevented from being born, perfectly just; but the inference that the unmarried ought to be punished does not appear to be equally so. The prolific power of nature is very far indeed from being called fully into action in this country. And yet, when we contemplate the insufficiency of the price of labor to maintain a large family, and the quantum of mortality which arises directly and indirectly from poverty; and add to this the crowds of children which are cut off prematurely in our great towns, our manufactories, and our workhouses, we shall be compelled

[1] New Observ. on Bills of Mortality, p. 247. 8vo. 1750.

to acknowledge that if the number born annually were not greatly thinned by this premature mortality, the funds for the maintenance of labor must increase with much greater rapidity than they have ever done hitherto in this country, in order to find work and food for the additional numbers that would then grow up to manhood.

Those therefore, who live single, or marry late, do not by such conduct contribute in any degree, to diminish the actual population; but merely to diminish the proportion of premature mortality which would otherwise be excessive; and consequently in this point of view do not seem to deserve any very severe reprobation or punishment.

The returns of the births and deaths are supposed, on good grounds, to be deficient, and it will therefore be difficult to estimate, with any degree of accuracy, the proportion which they bear to the whole population.

If we divide the existing population of England and Wales by the average of burials for the five years ending in 1800, it would appear that the mortality was only 1 in 49;[1] but this is a propor-

[1] The population is taken at 9,168,000, and the annual deaths at 186,000. (Obs. on the Results of Pop. Act, p. 6 and 9.)

tion so extraordinarily small, considering the number of our great towns and manufactories, that it cannot be considered as approaching to the truth.

Whatever may be the exact proportion of the inhabitants of the towns to the inhabitants of the country, the southern part of this island certainly ranks in that class of states where this proportion is greater than 1 to 3; indeed there is ample reason to believe that it is greater than 1 to 2. According to the rule laid down by Crome, the mortality ought consequently to be above 1 in 30;[1] according to Sussmilch, above 1 in 33.[2] In the *Observations on the Results of the Population Act*,[3] many probable causes of deficiency in the registry of the burials are pointed out; but no calculation is offered respecting the sum of these deficiencies, and I have no data whatever to supply such a calculation. I will only observe, therefore, that if we suppose them altogether to amount to such a number as will make the present annual mortality about 1 in 40, this must appear to be the lowest proportion of deaths that can well be supposed,

[1] Ueber die Bevolkerung der Europaischen Staaten, p 127.

[2] Sussmilch, Gottliche Ordnung, vol iii. p. 60.

[3] Page 6.

considering the circumstances of the country; and if true, would indicate a most astonishing superiority over the generality of other states, either in the habits of the people with respect to prudence and cleanliness, or in natural healthiness of situation.[1] Indeed it seems to be nearly ascertained, that both these causes, which tend to diminish mortality, operate in this country to a considerable degree. The small proportion of annual marriages mentioned before indicates, that habits of prudence extremely favorable to happiness prevail through a large part of the community in spite of the poor laws; and it appears from the clearest evidence, that the generality of our country parishes are very

[1] It is by no means surprising that our population should have been underrated formerly, at least by any person who attempted to estimate it from the proportion of births or deaths. Till the late Population Act, no one could have imagined that the actual returns of annual deaths, which might naturally have been expected to be as accurate in this country as in others, would turn out to be less than a 49th part of the population. If the actual returns for France, even so long ago as the ten years ending with 1780, had been multiplied by 49, she would have appeared at that time to have a population of above 40 millions. The average of annual deaths was 818,491. Necker de l'Administration des Finances, tom. i. c. ix. p 255. 12mo. 1785.

healthy. Dr. Price quotes an account of Dr. Percival, collected from the ministers of different parishes, and taken from positive enumerations, according to which, in some villages only a 45th, a 50th, a 60th, a 66th, and even a 75th part dies annually. In many of these parishes the births are to the deaths above 2 to 1, and in a single parish above 3 to 1.[1] These however are particular instances, and cannot be applied to the agricultural part of the country in general. In some of the flat situations, and particularly those near marshes, the proportions are found very different, and in a few the deaths exceed the births. In the 54 country parishes, the registers of which Dr. Short collected, choosing them purposely in a great variety of situations, the average mortality was as high as 1 in 37.[2] This is certainly much above the present mortality of our agricultural parishes in ge-

[1] Price's Observ. on Revers. Paym. vol. ii. note, p. 10. First additional Essay, 4th edit. In particular parishes, private communications are perhaps more to be depended upon than public returns; because in general those clergymen only are applied to who are in some degree interested in the subject, and of course take more pains to be accurate.

[2] New Observations on bills of Mortality, table ix, p. 133.

neral. The period which Dr. Short took included some considerable epidemics, which may possibly have been above the usual proportion. But sickly seasons should always be included, or we shall fall into great errors. In 1056 villages of Brandenburgh which Sussmilch examined, the mortality for six good years was 1 in 43; for 10 mixed years about 1 in 38½.[1] In the villages of England which Sir F. M. Eden mentions, the mortality seems to be about 1 in 47 or 48;[2] and in the late returns pursuant to the Population Act, a still greater degree of healthiness appears. Combining these observations together, if we take 1 in 46 or 1 in 48, as the average mortality of the agricultural part of the country including sickly seasons, this will be the lowest that can be supposed with any degree of probability. But this proportion will certainly be raised to 1 in 40, when we blend it with the mortality of the towns, and the manufacturing part of the community, in order to obtain the average for the whole kingdom.

The mortality in London, which includes so considerable a part of the inhabitants of this coun-

[1] Gottliche Ordnung, vol. i. c. ii. s. xxi. p. 74.

[2] Estimate of the number of inhabitants in G. Britain.

try, was, according to Dr. Price, at the time he made his calculations, 1 in 20¾; in Norwich 1 in 24½; in Northampton 1 in 26½; in Newbury 1 in 27½;[1] in Manchester 1 in 28; in Liverpool 1 in 27½,[2] &c. He observes that the number dying annually in towns is seldom so low as 1 in 28, except in consequence of a rapid increase produced by an influx of people at those periods of life when the fewest die, which is the case with Manchester and Liverpool,[3] and other very flourishing manufacturing towns. In general he thinks that the mortality in great towns may be stated at from 1 in 19[4] to 1 in 22 and 23; in moderate towns, from 1 in 24 to 1 in 28; and in country villages, from 1 in 40 to 1 in 50.[5]

The tendency of Dr. Price to exaggerate the unhealthiness of towns may perhaps be objected to these statements; but the objection seems to be

[1] Price's Observ. on Revers. Paym. vol. i. note, p. 272.

[2] Id. vol. ii. First additional Essay, note, p. 4.

[3] Price's Observ. on Revers. Paym. vol. ii. First additional Essay, note, p. 4.

[4] The mortality at Stockholm was, according to Wargentin, 1 in 19.

[5] Observ. on Revers. Paym. vol. ii. First additional Essay, p. 4.

only of weight with regard to London. The accounts from the other towns which are given are, from documents, which his particular opinions could not influence.[1] It should be remarked however, that there is good reason to believe that not only Lon[illegible] but the other towns in England, and probably also country villages, were at the time of these calculations less healthy than at present. Dr. William Heberden observes, that the registers of the ten years from 1759 to 1768,[2] from which Dr. Price calculated the probabilities of life in London, indicate a much greater degree of unhealthiness than the registers of late years. And the returns pursuant to the population act, even after allowing for great omissions in the burials, exhibit in all our provincial towns, and in the country, a degree of healthiness much greater than had before been calculated. At the same time I cannot but think

[1] An estimate of the population or mortality of London before the late enumeration always depended much on conjecture and opinion, on account of the great acknowledged deficiencies in the registers; but this was not the case in the same degree with the other towns here named. Dr. Price in allusion to a diminishing population, on which subject it appears that he has so widely erred, says very candidly, that perhaps he may have been insensibly influenced to maintain an opinion once advanced.

[2] Increase and Decrease of Diseases, p. 32. 4to. 1801.

that 1 in 31, the proportion of mortality for London, mentioned in the *Observations on the Results of the Population Act*,[1] is smaller than the truth. Five thousand may not probably be enough to allow for the omissions in the burials; and the absentees in the employments of war and commerce are not sufficiently adverted to. In estimating the proportional mortality the resident population alone should be considered.

There certainly seems to be something in great towns, and even in moderate towns, peculiarly unfavorable to the very early stages of life; and the part of the community on which the mortality principally falls seems to indicate, that it arises more from the closeness and foulness of the air which may be supposed to be unfavorable to the tender lungs of children, and the greater confinement which they almost necessarily experience, than from the superior degree of luxury and debauchery usually and justly attributed to towns. A married pair with the best constitutions, who lead the most regular and quiet life, seldom find that their children enjoy the same health in towns as in the country.

[1] Page 13.

In London, according to former calculations, one half of the born died under three years of age; in Vienna and Stockholm under two; in Manchester under five; in Norwich under five; in Northampton under ten.[1] In country villages on the contrary, half of the born live till thirty, thirty-five, forty, forty-six, and above. In the parish of Ackworth, in Yorkshire, it appears from a very exact account kept by Dr. Lee of the ages at which all died there for 20 years, that half of the inhabitants live to the age of 46;[2] and there is little doubt that if the same kind of account had been kept in some of those parishes before mentioned, in which the mortality is so small as 1 in 60, 1 in 66, and even 1 in 75, half of the born would be found to have lived to 50 or 55.

As the calculations respecting the ages to which half of the born live in towns depend more upon the births and deaths which appear in the registers, than upon any estimates of the number of people, they are on this account less liable to uncertainty than the calculations respecting the proportion of the inhabitants of any place which dies annually.

[1] Price's Observ. on Revers. Paym. vol. i. p. 264, 266. 4th edit.

[2] Price's Observ. on Revers. Paym. vol. i. p. 268.

in England.

To fill up the void occasioned by this mortality in towns, and to answer all further demands for population, it is evident that a constant supply of recruits from the country is necessary, and this supply appears in fact to be always flowing in from the redundant births of the country. Even in those towns where the births exceed the deaths, this effect is produced by the marriages of persons not born in the place. At a time when our provincial towns were increasing much less rapidly than at present, Dr. Short calculated that $\frac{9}{16}$ of the married were strangers.[1] Of 1618 married men, and 1618 married women, examined at the Westminster Infirmary, only 329 of the men, and 495 of the women, had been born in London.[2]

Dr. Price supposes that London with its neighboring parishes, where the deaths exceed the births, requires a supply of 10,000 persons annually. Graunt, in his time, estimated this supply for London alone at 6000;[3] and he further observes, that let the mortality of the city be what it will, arising from plague or any other great cause

[1] New Observations on bills of Mortality, p. 76.
[2] Price's Observ. on Revers. Paym. vol. ii. p. 17.
[3] Short's New Observ. Abstract from Graunt, p. 277.

of destruction, that it always fully repairs its loss in two years.[1]

As all these demands, therefore, are supplied from the country, it is evident that we should fall into a very great error if we were to estimate the proportion of births to deaths for the whole kingdom, by the proportion observed in country parishes, from which there must be such numerous emigrations.

We need not, however, accompany Dr. Price in his apprehensions, that the country will be depopulated by these emigrations, at least as long as the funds for the maintenance of agricultural labor remain unimpaired. The proportion of births, as well as the proportion of marriages clearly proves that, in spite of our increasing towns and manufactories, the demand on the country for people is by no means very pressing.

If we divide the present population of England and Wales by the average number of baptisms for the last five years, it will appear, that the babtisms are to the population as 1 to very nearly 36;[2] but it is supposed, with reason, that there are great

[1] Short's New Observ. Abstract from Graunt, p. 276.

[2] Average medium of baptisms for the last five years 255,426. Pop. 9,168,000. (Observ. on Results, p. 9.)

in England.

omissions in the baptisms: and it is conjectured that these omissions are greater than in the burials. On this point, however, I should be inclined to think differently, at least with respect to the last twenty years, though probably it was the case formerly. The increase of population during this period estimated from the births, is not greater than is warranted by the proportion of births to deaths, which would have been the case if the omissions in the births had been greater than in the deaths; and the absolutely stationary number of deaths during the last twenty years, notwithstanding a considerable increase of births, seems to be rather inconsistent with the idea of greater omissions in the births.

Dr. Short estimated the proportion of births to the population of England as 1 to 28.[1] In the Agricultural report of Suffolk, the proportion of births to the population was calculated at 1 to 30. For the whole of Suffolk, according to the late returns, this proportion is not much less than 1 to 33.[2] According to a correct account of thir-

[1] New Observ. p. 267.

[2] In private inquiries, dissenters, and those who do not christen their children, will not of course be reckoned in the population, and consequently such inquiries, as far as they extend, will more accurately express the true

teen villages from actual enumerations, produced by Sir F. M. Eden, the proportion of births to the population was as 1 to 33; and from another account on the same authority, taken from towns and manufacturing parishes, as 1 to 27¼.[1] If, combining all these circumstances, and adverting, at the same time, to the acknowledged deficiency in the registry of births, and the known increase of our population of late years, we suppose the true proportion of the births to the population to be as 1 to 30; then, assuming the present mortality to be 1 in 40, as before suggested, we shall nearly keep the proportion of baptisms to burials, which appears in the late returns. The births will be to the deaths as 4 to 3 or 13⅓ to 10, a proportion more than sufficient to account for the increase of population which has taken place since the American war, after allowing for those who may be supposed to have died abroad.

In the *Observations on the Results of the Popu-*

proportion of births; and we are fairly justified in making use of them, in order to estimate the acknowledged deficiency of births in the public returns.

[1] Estimate of the number of inhabitants in G. Britain, &c. p. 27.

in England.

lation Act, it is remarked that the average duration of life in England appears to have increased in the proportion of 117 to 100,[1] since the year 1780. So great a change in so short a time, if true, would be a most striking phenomenon. But I am inclined to suspect, that the whole of this proportional diminution of burials does not arise from increased healthiness, but is occasioned in part, by the greater number of deaths which must necessarily have taken place abroad, owing to the very rapid increase of our foreign commerce since this period; and to the great number of persons absent in naval and military employments, and the constant supply of fresh recruits necessary to maintain undiminished so great a force. A perpetual drain of this kind would certainly have a tendency to produce the effect observed in the returns, and might keep the burials stationary, while the births and marriages were increasing with some rapidity. At the same time, as the increase of population since 1780 is incontrovertible, and the present mortality extraordinarily small, I should still be disposed to believe that the greater part of the effect is to be attributed to increased healthiness.

[1] Page 6.

A mortality of 1 in 36 is perhaps too small a proportion of deaths for the average of the whole century; but a proportion of births to deaths as 12 to 10, calculated on a mortality of 1 in 36, would double the population of a country in 125 years, and is therefore as great a proportion of births to deaths as can be true for the average of the whole century. None of the late calculations imply a more rapid increase than this.

We must not suppose however, that this proportion of births to deaths, or any assumed proportion of births and deaths to the whole population has continued nearly uniform throughout the century. It appears from the registers of every country which have been kept for any length of time, that considerable variations occur at different periods. Dr. Short, about the middle of the century, estimated the proportion of births to deaths as 11 to 10;[1] and if the births were at the same time a twenty-eighth part of the population, the mortality was then as high as 1 in 30$\frac{2}{7}$. We now suppose that the proportion of births to deaths is above 13 to 10; but if we were to assume this proportion as

[1] New Observ. tables ii. & iii. p. 22 & 44. Price's Observ. on Revers. Paym. vol. ii. p. 311.

in England.

a criterion by which to estimate the increase of population for the next thirty or forty years, we should probably fall into a very gross error. The effects of the late scarcities are strongly marked in the returns of the *Population Act* by a decrease of births and an increase of burials, and should such seasons frequently recur, they would soon destroy the great excess of births which has been observed during the last 20 years; and indeed we cannot reasonably suppose that the resources of this country should increase for any long continuance with such rapidity, as to allow of a permanent proportion of births to deaths as 13 to 10, unless indeed this proportion were principally caused by great foreign drains.

From all the data that could be collected, the proportion of births to the whole population of England and Wales, has been assumed to be as 1 to 30; but this is a smaller proportion of births than has appeared in the course of this review, to take place in any other country except Norway and Switzerland; and it has been hitherto usual with political calculators to consider a great proportion of births as the surest sign of a vigorous and flourishing state. It is to be hoped, however, that this prejudice will not last long. In coun-

tries circumstanced like America or Russia, or in other countries after any great mortality, a large proportion of births may be a favorable symptom; but in the average state of a well peopled territory, there cannot well be a worse sign than a large proportion of births, nor can there well be a better sign than a small proportion.

Sir Francis d'Ivernois very justly obscrves, that, "if the various states of Europe kept and publish-"ed annually an exact account of their population, "noting carefully in a second column the exact "age at which the children die, this second co-"lumn would shew the relative merit of the go-"vernments, and the comparative happiness of "their subjects. A simple arithmetical statement "would then perhaps be more conclusive than all "the arguments that could be adduced."[1] In the importance of the inferences to be drawn from such tables, I fully agree with him; and to make these inferences, it is evident that we should attend less to the column expressing the number of children born, than to the column expressing the number which survived the age of infancy and reached manhood; and this number will almost invariably be the greatest where the proportion of the births

[1] Tableau des Pertes, &c. c. ii. p. 16.

in England.

to the whole population is the least. In this point, we rank next after Norway and Switzerland, which, considering the number of our great towns and manufactories, is certainly a very extraordinary fact. As nothing can be more clear than that all our demands for population are fully supplied, if this be done with a small proportion of births, it is a decided proof of a very small mortality, a distinction on which we may justly pride ourselves. Should it appear from future investigations that I have made too great an allowance for omissions, both in the births and in the burials, I shall be extremely happy to find that this distinction which, other circumstances being the same, I consider as the surest test of happiness and good government, is even greater than I have supposed it to be. In despotic, miserable, or naturally unhealthy countries, the proportion of births to the whole population will generally be found very great.

On an average of the five years ending in 1800, the proportion of births to marriages is 347 to 100. In 1760 it was 362 to 100, from which an inference is drawn that the registers of births, however deficient, were certainly not more deficient formerly than at present.[1] But a change

[1] Observations on the Results of the Population Act. p. 8.

of this nature, in the appearance of the registers, might arise from causes totally unconnected with deficiencies. If from the acknowledged greater healthiness of the latter part of the century, compared with the middle of it, a greater number of children survived the age of infancy, a greater proportion of the born would of course live to marry, and this circumstance would produce a greater present proportion of marriages compared with the births. On the other hand, if the marriages were rather more prolific formerly than at present, owing to their being contracted at an earlier age, the effect would be a greater proportion of births compared with the marriages. The operation of either or both of these causes would produce exactly the effect observed in the registers; and consequently from the existence of such an effect no inference can justly be drawn against the supposed increasing accuracy of the registers. The influence of the two cases just mentioned on the proportions of annual births to marriages will be explained in a subsequent chapter.

With regard to the general question whether we have just grounds for supposing that the registry of births and deaths was more deficient in the former part of the century than in the latter part,

in England.

I should say, that the late returns tend to confirm the suspicion of former inaccuracy, and to shew that the registers of the earlier part of the century, in every point of view, afford very uncertain data on which to ground any estimates of past population. In the years 1710, 1720, and 1730, it appears from the returns, that the deaths exceeded the births; and taking the six periods ending in 1750,[1] including the first half of the century, if we compare the sum of the births with the sum of the deaths, the excess of the births is so small as to be perfectly inadequate to account for the increase of a million, which, upon a calculation from the births alone, is supposed to have taken place in that time.[2] Consequently, either the registers are very inaccurate, and the deficiencies in the births greater than in the deaths; or these periods, each at the distance of ten years, do not express the just average. These particular years may have been more unfavorable with respect to the proportion of births to deaths than the rest; indeed one of them, 1710, is known to have been a year of great scarcity and distress. But if this

[1] Population Abstract Parish Registers. Final Summary, p. 455.

[2] Observ. on the Results of the Population Act. p. 9.

suspicion, which is very probable, be admitted, so as to affect the six first periods, we may justly suspect the contrary accident to have happened with regard to the three following periods ending with 1780, in which thirty years it would seem, by the same mode of calculation, that an increase of a million and a half had taken place.[1] At any rate it must be allowed, that the three separate years, taken in this manner, can by no means be considered as sufficient to establish a just average; and what rather encourages the suspicion that these particular years might be more than usually favorable with regard to births is, that the increase of births from 1780 to 1785 is unusually small,[2] which would naturally be the case without supposing a slower progress than before, if the births in 1780 had been accidentally above the average.

On the whole, therefore, considering the probable inaccuracy of the earlier registers, and the very great danger of fallacy in drawing general inferences from a few detached years, I do not think that we can depend upon any estimates of past population, founded on a calculation from the births

[1] Observ. on the Results of the Population Act, p. 9.
[2] Ibid.

in England.

till after the year 1780, when every following year is given, and a just average of the births may be obtained. As a further confirmation of this remark I will just observe, that in the final summary of the abstracts from the registers of England and Wales, it appears that in the year 1790 the total number of births was 248,774, in the year 1795, 247,218, and in 1800, 247,147.[1] Consequently if we had been estimating the population from the births, taken at three separate periods of five years, it would have appeared, that the population during the last ten years had been regularly decreasing, though we have very good reason to believe that it has increased considerably.

In the *Observations on the Results of the Population Act*,[2] a table is given of the population of England and Wales throughout the last century calculated from the births; but for the reasons given above, little reliance can be placed on it, and for the population at the revolution, I should be inclined to place more dependence on the old calculations from the number of houses.

It is possible, indeed, though not probable, that

[1] Population Abstract, Parish Registers, p. 455.

[2] Page 9.

these estimates of the population at the different periods of the century may not be very far from the truth, because opposite errors may have corrected each other; but the assumption of the uniform proportion of births on which they are founded is false on the face of the calculations themselves. According to these calculations, the increase of population was more rapid in the period from 1760 to 1780, than from 1780 to 1800; yet it appears that the proportion of deaths about the year 1780 was greater than in 1800 in the ratio of 117 to 100. Consequently the proportion of births before 1780 must have been much greater than in 1800, or the population in that period could not possibly have increased faster. This overthrows at once the supposition of any thing like uniformity in the proportion of births.

I should indeed have supposed from the analogy of other countries, and the calculations of Mr. King and Dr. Short, that the proportion of births at the beginning and in the middle of the century was greater than at the end. But this supposition would, in a calculation from the births, give a smaller population in the early part of the century, than is given in the *Results of the Population Act*, though there are strong reasons for supposing that the population there given is too small. Accord-

ing to Davenant, the number of houses in 1690 was 1,319,215, and there is no reason to think that this calculation erred on the side of excess. Allowing only 5 to a house instead of $5\frac{3}{7}$ which is supposed to be the proportion at present, this would give a population of about six millions and a half, and it is perfectly incredible that from this time to the year 1710, the population should have diminished nearly a million and a half. It is far more probable that the omissions in the births should have been much greater than at present, and greater than in the deaths; and this is further confirmed by the observation before alluded to, that in the first half of the century the increase of population, as calculated from the births, is much greater than is warranted by the proportion of births to deaths. In every point of view therefore the calculations from the births are little to be depended on.

It must indeed have appeared to the reader in the course of this work, that registers of births or deaths, excluding any suspicion of deficiencies, must at all times afford very uncertain data for an estimate of population. On account of the varying circumstances of every country, they are both precarious guides. From the greater apparent regularity of the births, political calculators have

generally adopted them as the ground of their estimates in preference to the deaths. Necker, in estimating the population of France, observes that an epidemic disease, or an emigration, may occasion temporary differences in the deaths, and that therefore the number of births is the most certain criterion.[1] But the very circumstance of the apparent regularity of the births in the registers will now and then lead into great errors. If in any country we can obtain registers of burials for two or three years together a plague or mortal epidemic will always show itself, from the very sudden increase of the deaths during its operation, and the still greater diminution of them afterwards. From these appearances, we should of course be directed, not to include the whole of a great mortality in any very short term of years. But there would be nothing of this kind to guide us in the registers of births; and after a country had lost an eighth part of its population by a plague, an average of the five or six subsequent years might show an increase in the number of births, and our calculations would give the population the highest at the very time that it was the lowest. This appears

[1] De l'Administration des Finances, tom. i. c. ix. p. 252. 12mo. 1785.

very strikingly in many of Sussmilch's tables, and most particularly in a table for Prussia and Lithuania, which I shall insert in a following chapter, where, in the year subsequent to the loss of one third of the population, the births were considerably increased, and in an average of five years but very little diminished; and this at a time when, of course, the country could have made but a very small progress towards recovering its former population.

We do not know indeed of any extraordinary mortality which has occurred in England since 1700; and there are reasons for supposing that the proportions of the births and deaths to the population during the last century, have not experienced such great variations as in many countries on the continent; at the same time it is certain, that the sickly seasons which are known to have occurred would, in proportion to the degree of their fatality, produce similar effects; and the change which has been observed in the mortality of late years should dispose us to believe, that similar changes might formerly have taken place respecting the births, and should instruct us to be extremely cautious in applying the proportions which are observed to be true at present, to past or future periods.

CHAPTER VIII.

Of the Checks to Population in Scotland and Ireland.

AN examination, in detail, of the statistical account of Scotland would furnish numerous illustrations of the principle of population; but I have already extended this part of the work so much that I am fearful of tiring the patience of my readers; and shall therefore confine my remarks in the present instance to a few circumstances which have happened to strike me.

On account of the acknowledged omissions in the registers of births, deaths, and marriages, in most of the parishes of Scotland, few just inferences can be drawn from them. Many give extraordinary results. In the parish of Crossmichael[1] in Kircudbright, the mortality appears to be only 1 in 98, and the yearly marriages 1 in 192. These proportions would imply the most unheard of healthiness, and the most extraordinary operation of

[1] Statistical Account of Scotland, vol. i. p. 167.

the preventive check; but there can be little doubt that they are principally occasioned by omissions in the registry of burials, and the celebration of a part of the marriages in other parishes.

In general, however, it appears from registers that are supposed to be accurate, that in the country parishes the mortality is small; and that the proportions of 1 in 45, 1 in 50, and 1 in 55, are not uncommon. According to a table of the probabilities of life, calculated from the bills of mortality in the parish of Kettle by Mr. Wilkie, the expectation of an infant's life is 46.6,[1] which is very high, and the proportion which dies in the first year is only $\frac{1}{10}$. Mr. Wilkie further adds, that from 36 parish accounts, published in the first volume, the expectation of an infant's life appears to be 40.3. But in a table which he has produced in the last volume, calculated for the whole of Scotland from Dr. Webster's survey, the expectation at birth appears to be only 31 years.[2] This, however, he thinks, must be too low, as it exceeds but little the calculations for the town of Edinburgh.

[1] Statistical Account of Scotland, vol. ii. p. 407.

[2] Id. vol. xxi. p. 383.

The Scotch registers appeared to be in general so incomplete, that the returns of 99 parishes only are published in the Population Abstract; and, if any judgment can be formed from these, they show a very extraordinary degree of healthiness, and a very small proportion of births. The sum of the population of these parishes in 1801 was 217,873;[1] the average of burials for 5 years ending in 1800, was about 3815; and of births, 4928:[2] from which it would appear that the mortality in these parishes was only 1 in 56, and the proportion of births 1 in 44. But these proportions are so extraordinary, that it is difficult to conceive that they approach near the truth. Combining them with the calculations of Mr. Wilkie, it will not appear probable that the proportion of deaths and births in Scotland should be smaller than what has been allowed for England and Wales; namely, 1 in 40 for the deaths, and 1 in 30 for the births, and it seems to be generally agreed that the proportion of births to deaths is 4 to 3.[3]

[1] Population Abstract, Parish Registers, p. 459.

[2] Id. p 458

[3] Statistical Account of Scotland, vol. xxi. p. 383.

in Scotland and Ireland.

With respect to the marriages, it will be still more difficult to form a conjecture. They are registered so irregularly that no returns of them are given in the Population Abstract. I should naturally have thought from the Statistical Account, that the tendency to marriage in Scotland was upon the whole greater than in England; but if it be true that the births and deaths bear the same proportion to each other, and to the whole population, in both countries the proportion of marriages cannot be very different. It should be remarked, however, that supposing the operation of the preventive check to be exactly the same in both countries, and the climates to be equally salubrious, a greater degree of want and poverty would take place in Scotland, before the same mortality was produced as in England, owing to the smaller proportion of towns and manufactories in the former country than in the latter.

From a general view of the statistical accounts the result seems clearly to be, that the condition of the lower classes of people in Scotland has been considerably improved of late years. The price of provisions has risen; but almost invariably the price of labor has risen in a greater proportion; and it is remarked in most parishes, that more

butcher's meat is consumed among the common people than formerly; that they are both better lodged and better clothed; and that their habits with respect to cleanliness are decidedly improved.

A part of this improvement is probably to be attributed to the increase of the preventive check. In some parishes a habit of later marriages is noticed, and in many places, where it is not mentioned, it may be fairly inferred, from the proportions of births and marriages, and other circumstances. The writer of the account of the parish of Elgin,[1] in enumerating the general causes of depopulation in Scotland, speaks of the discouragement to marriage from the union of farms, and the consequent emigration of the flower of their young men of every class and description, very few of whom ever return. Another cause that he mentions is the discouragement to marriage from luxury; at least, he observes, till people are advanced in years, and then a puny race of children are produced. "Hence, how many men of every description re-"main single, and how many young women of "every rank are never married, who in the begin-"ning of this century, or even so late as 1745,

[1] Vol. v. p. 1.

in Scotland and Ireland.

" would have been the parents of a numerous and " healthy progeny."

In those parts of the country where the population has been rather diminished by the introduction of grazing, or an improved system of husbandry which requires fewer hands, this effect has chiefly taken place; and I have little doubt, that in estimating the decrease of the population, since the end of the last, or the beginning of the present century, by the proportion of births at the different periods, they have fallen into the error which has been particularly noticed with regard to Switzerland, and have in consequence made the difference greater than it really is.[1]

The general inference on this subject, which I should draw from the different accounts is, that the marriages are rather later than formerly. There are however some decided exceptions. In those parishes where manufactures have been introduced, which afford employment to children as soon as they have reached their 6th or 7th year, a habit

[1] One writer takes notice of this circumstance, and observes that formerly the births seem to have borne a greater proportion to the whole population than at present. Probably, he says, more were born, and there was a greater mortality. Parish of Montquitter, vol. vi. p. 121.

of marrying early naturally follows; and while the manufacture continues to flourish and increase, the evil arising from it is not very perceptible; though humanity must confess with a sigh, that one of the reasons why it is not so perceptible is, that room is made for fresh families, by the unnatural mortality which takes place among the children so employed.

There are other parts of Scotland, however, particularly the Western Isles, and some parts of the Highlands, where population has considerably increased from the subdivision of possessions, and where, perhaps, the marriages may be earlier than they were formerly, though not caused by the introduction of manufactures. Here the poverty which follows is but too conspicuous. In the account of Delting in Shetland,[1] it is remarked that the people marry very young, and are encouraged to this by their landlords, who wish to have as many men on their grounds as possible to prosecute the ling fishery; but that they generally involve themselves in debt and large families. The writer further observes, that formerly there were some old regulations called country acts, by one

[1] Vol. i. p. 385.

in Scotland and Ireland.

of which it was enacted, that no pair should marry unless possessed of 40 *l.* Scots of free gear. This regulation is not now enforced. It is said that these regulations were approved and confirmed by the parliament of Scotland, in the reign of Queen Mary, or James VI.

In the account of Bressay Burra and Quarff in Shetland,[1] it is observed that the farms are very small, and few have a plough. The object of the proprietors is to have as many fishermen on their lands as possible—a great obstacle to improvements in agriculture. They fish for their masters, who either give them a fee totally inadequate, or take their fish at a low rate. The writer remarks that, "in most countries the increase of population "is reckoned an advantage, and justly. It is, "however, the reverse in the present state of Shet- "land. The farms are split. The young men "are encouraged to marry without having any "stock. The consequence is poverty and dis- "tress. It is believed that there is at present in "these islands double the number of people that "they can properly maintain."

The writer of the account of Auchterderran,[2] in

[1] Vol. x. p. 194.
[2] Vol. i. p. 449.

the county of Fife, says, that the meagre food of the laboring man is unequal to oppose the effects of incessant hard labor upon his constitution, and by this means his frame is worn down before the time of nature's appointment, and adds, "That "people continue voluntarily to enter upon such "a hard situation by marrying shows how far the "union of the sexes, and the love of independence, "are principles of human nature." In this observation, perhaps the love of independence had better have been changed for the love of progeny.

The island of Jura[1] appears to be absolutely overflowing with inhabitants in spite of constant and numerous emigrations. There are sometimes 50 or 60 on a farm. The writer observes, that such a swarm of inhabitants, where manufactures, and many other branches of industry are unknown, are a very great load upon the proprietors, and useless to the state.

Another writer[2] is astonished at the rapid increase of population, in spite of a considerable emigration to America in 1770, and a large drain of young men during the late war. He thinks it

[1] Vol. xii. p. 317.

[2] Parish of Lochalsh, county of Ross, vol. xi. p. 422

difficult to assign adequate causes for it, and observes, that if the population continue to increase in this manner, unless some employment be found for the people, the country will soon be unable to support them. And in the account of the parish of Callander[1] the writer says, that the villages of this place, and other villages in similar situations, are filled with naked and starving crowds of people, who are pouring down for shelter or for bread; and then observes that whenever the population of a town or village exceeds the industry of its inhabitants, from that moment the place must decline.

A very extraordinary instance of a tendency to rapid increase occurs in the register of the parish of Duthil,[2] in the county of Elgin; and as errors of excess are not so probable as errors of omission, it seems to be worthy of attention. The proportion of annual births to the whole population is as 1 to 12; of marriages as 1 to 55; and of deaths the same. The births are to deaths as 70 to 15, or $4\frac{1}{3}$ to 1. We may suppose some inaccuracy respecting the number of deaths which seems

[1] Vol. xi. p. 574.
[2] Vol. iv. p. 308.

to err on the side of defect; but the very extraordinary proportion of the annual births, amounting to $\frac{1}{28}$ of the whole population, does not seem to be easily liable to error; and the other circumstances respecting the parish tend to confirm the statement. Out of a population of 830, there were only three bachelors, and each marriage yielded 7 children. Yet with all this the population is supposed to have decreased considerably since 1745: and it appears, that this excessive tendency to increase had been occasioned by an excessive tendency to emigrate. The writer mentions very great emigrations; and observes that whole tribes who enjoyed the comforts of life in a reasonable degree had of late years emigrated from different parts of Scotland, from mere humor, and a fantastical idea of becoming their own masters and freeholders.

Such an extraordinary proportion of births caused evidently by habits of emigration shows the extreme difficulty of depopulating a country merely by taking away its people. Take but away its industry, and the sources of its subsistence, and it is done at once.

It may be observed that in this parish the average number of children to a marriage is said to be 7, though, from the proportion of annual births to an-

in Scotland and Ireland.

nual marriages it would appear to be only $4\frac{2}{3}$. This difference occurs in many other parishes, from which we may conclude, that the writers of these counts very judiciously adopted some other mode of calculation than the mere uncorrected proportion of annual births to marriages; and probably founded the results they give, either on personal inquiries, or researches into their registers, to find the number of children which had been born to each mother in the course of her marriage.

The women of Scotland appear to be prolific. The average of 6 children to a marriage is frequent; and of 7, and even $7\frac{1}{2}$, not very uncommon. One instance is very curious, as it appears as if this number was actually living to each marriage, which would of course imply, that the greater number had been and would be born. In the parish of Nigg,[1] in the county of Kincardine, the account says that there are 57 land families, and 405 children; which gives nearly $7\frac{1}{9}$ each; 42 fisher families, and 314 children; nearly $7\frac{1}{2}$ each. Of the land families which have had no children there were 7; of the fishers, none. If this statement be

[1] Vol. vii. p. 194.

just I should conceive that each marriage must have yielded, or would yield, in the course of its duration, as many as 9 or 10 births.

When, from any actual survey, it appears that there are about 3 living children to each marriage, or 5 persons, or only $4\frac{1}{2}$ to a house, which are very common proportions, we must not infer that the average number of births to a marriage is not much above 3. We must recollect that all the marriages or establishments of the present year are of course without children; all of the year before have only one, all of the year before that can hardly be expected to have as many as two, and all of the fourth year preceding will certainly, in the natural course of things, have less than three. One out of five children is a very unusually small proportion to lose in the course of ten years; and after ten years, it may be supposed that the eldest begin to leave their parents; so that if each marriage be supposed accurately to yield 5 births in the course of its duration, the families which had increased to their full complement would only have 4 children, and a very large proportion of those which were in the stages of increase would have

less than three;[1] and consequently taking into consideration the number of families where one of the parents may be supposed to be dead, I much doubt whether in this case a survey would give $4\frac{1}{2}$ to a family. In the parish of Duthil,[2] already noticed, the number of children to a marriage is mentioned as 7, and the number of persons to a house as only 5.

The poor of Scotland are in general supported by voluntary contributions, distributed under the inspection of the minister of the parish; and it appears, upon the whole, that they have been conducted with considerable judgment. Having no claim of right to relief,[3] and the supplies, from the mode of their collection, being necessarily uncertain, and never abundant, the poor have considered them merely as a last resource in cases of

[1] It has been calculated that, on an average, the difference of age in the children of the same family is about two years.

[2] Vol. iv. p. 308.

[3] Mr. Rose of the Treasury, in a late pamphlet on the subject of the poor, has controverted this observation: but whatever may be the law on the subject, the practice is certainly as here represented; and it is the practice alone that concerns the present question

extreme distress, and not as a fund on which they might safely rely, and an adequate portion of which belonged to them by the laws of their country in all difficulties.

The consequence of this is, that the common people make very considerable exertions to avoid the necessity of applying for such a scanty and precarious relief. It is observed, in many of the accounts, that they seldom fail of making a provision for sickness and for age; and in general, the grown up children and relations of persons who are in danger of falling upon the parish, step forward, if they be in any way able to prevent such a degradation, which is universally considered as a disgrace to the family.

The writers of the accounts of the different parishes frequently reprobate in very strong terms the system of English assessments for the poor, and give a decided preference to the Scotch mode of relief. In the account of Paisley,[1] though a manufacturing town, and with a numerous poor, the author still reprobates the English system, and makes an observation on this subject, in which

[1] Vol. vii. p. 74.

in Scotland and Ireland.

perhaps he goes too far. He says, that though there are in no country such large contributions for the poor as in England, yet there is no where so great a number of them; and their condition, in comparison of *the poor of other countries, is truly most miserable.*

In the account of Caerlaverock,[1] in answer to the question, How ought the poor to be supplied? It is most judiciously remarked, "that distress "and poverty multiply in proportion to the funds "created to relieve them; that the measures of "charity ought to remain invisible, till the mo- "ment when it is necessary that they should be "distributed; that in the country parishes of "Scotland in general, small occasional voluntary "collections are sufficient; that the legislature "has no occasion to interfere to augment the "stream which is already copious enough; in "fine, that the establishment of a poor's rate would "not only be unnecessary but hurtful, as it would "tend to oppress the landholder, without bringing "relief on the poor."

These, upon the whole, appear to be the prevailing opinions of the clergy of Scotland. There

[1] Vol. vi. p. 21.

are, however, some exceptions; and the system of assessments is sometimes approved, and the establishment of it proposed. But this is not to be wondered at. In many of these parishes the experiment had never been made; and without being thoroughly aware of the principle of population from theory, or having fully seen the evils of poor laws in practice, nothing seems, on a first view of the subject, more natural than the proposal of an assessment, to which the uncharitable, as well as the charitable, should be made to contribute, according to their abilities, and which might be increased or diminished, according to the wants of the moment.

The endemic and epidemic diseases in Scotland fall chiefly, as is usual, on the poor. The scurvy is in some places extremely troublesome and inveterate; and in others it arises to a contagious leprosy, the effects of which are always dreadful, and not unfrequently mortal. One writer calls it the scourge and bane of human nature.[1] It is generally attributed to cold and wet situations, meagre and unwholesome food, impure air from

[1] Parishes of Forbes and Kearn, county of Aberdeen, vol. xi. p. 189.

damp and crowded houses, indolent habits, and the want of attention to cleanliness.

To the same causes, in great measure, are attributed the rheumatisms which are general, and the consumptions which are frequent, among the common people. Whenever, in any place, from particular circumstances, the condition of the poor has been rendered worse, these disorders, particularly the latter, have been observed to prevail with greater force.

Low nervous fevers, and others of a more violent and fatal nature, are frequently epidemic, and sometimes take off considerable numbers; but the most fatal epidemic, since the extinction of the plague, which formerly visited Scotland, is the small-pox, the returns of which are, in many places, at regular intervals; in others, irregular, but seldom at a greater distance than 7 or 8 years. Its ravages are dreadful, though in some parishes not so fatal as they were some time ago. The prejudices against inoculation are still great; and as the mode of treatment must almost necessarily be bad in small and crowded houses, and the custom of visiting each other during the disorder still subsists in many places, it may be imagined

that the mortality must be considerable, and the children of the poor the principal sufferers. In some parishes of the Western Isles and the Highlands, the number of persons to a house has increased from 4½ and 5, to 6½ and 7. It is evident that if such a considerable increase, without the proper accommodations for it, do not absolutely generate the disease, it must give to its devastations tenfold force when it arrives.

Scotland has at all times been subject to years of scarcity, and occasionally even to dreadful famines. The years 1635, 1680, 1688, the concluding years of the last century, the years 1740, 1756, 1766, 1778, 1782, and 1783, are all mentioned, in different places, as years of very great sufferings from want. In the year 1680, so many families perished from this cause, that for six miles, in a well-inhabited extent, there was not a smoke remaining.[1] The seven years at the end of the last century were called the ill years. The writer of the account of the parish of Montquhitter,[2] says, that of 16 families, on a farm in that

[1] Parish of Duthil, vol. iv. p. 308

[2] Vol. vi. p. 121

neighborhood, 13 were extinguished; and on another, out of 169 individuals, only 3 families, the proprietors included, survived. Extensive farms, now containing a hundred souls, being entirely desolated, were converted into a sheep walk. The inhabitants of the parish in general were diminished by death to one half, or, as some affirm, to one fourth of the preceding number. Until 1709 many farms were waste. In 1740, another season of scarcity occurred, and the utmost misery was felt by the poor, though it fell short of death. Many offered in vain to serve for their bread. Stout men accepted thankfully twopence a day in full for their work. Great distress was also suffered in 1782 and 1783, but none died. "If at "this critical period," the author says, "the "American war had not ceased; if the copious "magazines, particularly of pease, provided for "the navy, had not been brought to sale, what "a scene of desolation and horror would have "been exhibited in this country!"

Many similar descriptions occur in different parts of the Statistical Account; but these will be sufficient to shew the nature and intensity of the distress which has been occasionally felt from want.

The year 1783 depopulated some parts of the Highlands, and is mentioned as the reason why in these places the number of people was found to have diminished since Dr. Webster's survey. Most of the small farmers in general, as might be expected, were absolutely ruined by the scarcity; and those of this description, in the Highlands, were obliged to emigrate to the Lowlands as common laborers,[1] in search of a precarious support. In some parishes, at the time of the last survey, the effect of the ruin of the farmers during this bad year was still visible in their depressed condition, and the increased poverty and misery of the common people, which is a necessary consequence of it.

In the account of the parish of Grange,[2] in the county of Banff, it is observed, that the year 1783 put a stop to all improvements by green crops, and made the farmers think of nothing but raising grain. Tenants were most of them ruined. Before this period, consumptions were not near so frequent as they have been since. This may be

[1] Parish of Kincardine, county of Ross, vol. iii. p. 505.
[2] Vol. ix. p. 550.

in Scotland and Ireland.

justly attributed to the effects of the scarcity and bad victual in the year 1783, to the long inclement harvests in 1782 and 1787, in both which seasons the laborers were exposed to much cold and wet during the three months that the harvests continued; but principally to the change that has of late taken place in the manner of living among the lower ranks. Formerly every householder could command a draught of small beer, and killed a sheep now and then, out of his own little flock; but now the case is different. The frequent want of the necessaries of life among the poor, their damp and stinking houses, and dejection of mind among the middling classes, appear to be the principal causes of the prevailing distempers, and mortality of this parish. Young people are cut off by consumptions, and the more advanced by dropsies and nervous fevers.

The state of this parish, which, though there are others like it, may be considered as an exception to the average state of Scotland, was, without doubt, occasioned by the ruin of the tenants; and the effect is not to be wondered at, as no greater evil can easily happen to a country, than the loss of agricultural stock and capital.

We may observe, that the diseases of this parish are said to have increased, in consequence of the scarcity and bad victual of 1783. The same circumstance is noticed in many other parishes, and it is remarked, that though few people died of absolute famine, yet that mortal diseases almost universally followed.

It is remarked also, in some parishes, that the number of births and marriages are affected by years of scarcity and plenty.

Of the parish of Dingwall,[1] in the county of Ross, it is observed, that after the scarcity of 1783, the births were 16 below the average, and 14 below the lowest number of late years. The year 1787 was a year of plenty, and the following year the births increased in a similar proportion, and were 17 above the average, and 11 above the highest of other years.

In the account of Dunrossness,[2] in Orkney, the writer says that the annual number of marriages depends much on the seasons. In good years they may amount to thirty or upwards;

[1] Volume iii. p. 1.
[2] Volume vii. p. 391.

but when crops fail, will hardly come up to the half of that number.

The whole increase of Scotland, since the time of Dr. Webster's survey in 1755, is about 260,000,[1] for which a proportionate provision has been made in the improved state of agriculture and manufactures, and in the increased cultivation of potatoes, which in some places form two-thirds of the diet of the common people. It has been calculated that the half of the surplus of births in Scotland is drawn off in emigrations; and it cannot be doubted that this drain tends greatly to relieve the country, and to improve the condition of those which remain. Scotland is certainly still overpeopled, but not so much as it was a century or half a century ago, when it contained fewer inhabitants.

The details of the population of Ireland are but little known. I shall only observe therefore, that the extended use of potatoes has allowed of a very rapid increase of it during the last century. But the cheapness of this nourishing root, and the

[1] According to the returns in the late estimate, the whole population of Scotland is above 1,590,000, and therefore the increase up to the present time is above 320,000.

small piece of ground which, under this kind of cultivation, will in average years produce the food for a family, joined to the ignorance and barbarism of the people, which have prompted them to follow their inclinations with no other prospect than an immediate bare subsistence, have encouraged marriage to such a degree that the population is pushed much beyond the industry and present resources of the country; and the consequence naturally is that the lower classes of people are in the most depressed and miserable state. The checks to the population are of course chiefly of the positive kind, and arise from the diseases occasioned by squalid poverty, by damp and wretched cabins, by bad and insufficient clothing, by the filth of their persons, and occasional want. To these positive checks have, of late years, been added the vice and misery of intestine commotion, of civil war, and of martial law.

INDEX.

A.

ABRAM and Lot, their separation, an illustration of the cause which overspread the whole earth with people, i. 111.

ABYSSINIA; state of, with respect to the checks to population, i. 187, 188.

AFRICA, of the checks to population in different parts of, i. 173. Great disposition of the country to population in general, i. 173. This counterbalanced by the habits of the Negro nations. See the article *Negro*. State of Abyssinia, i. 187, 188. Of Egypt, i. 193.

AGOWS, an Abyssinian nation, dreadful misery and penury in, i. 186.

AGRICULTURE, very great encouragements given to it in China, i. 248—250. Powerful effect of these, i. 251, 253. Is the sole species of industry by which multitudes can exist, i. 275, 276. In France, rather increased than diminished during the revolution, i. 434. Statements respecting the present condition of it in that country, i. 448. Processes for abridging agricultural labor, tend rather to diminish than increase the whole produce, ii. 203. Of the definition of wealth; and of the agricultural and commercial systems, ii. 206. Consequences of defining wealth as the gross produce of the land, ii. 206. As the annual produce of the land and labor (Dr. Smith's definition,) ii. 206. As the clear surplus produce of the land, ii. 206. The surplus produce of the cultivators, the great fund which ultimately pays all who are not employed upon the land, ii. 207. Different effect of a clear monied revenue arising from manufactures of the same extent, ii. 209. Manufactures, according to the Economists, an object on which revenue is spent, and not part of the revenue itself, ii. 210. Commerce and manufactures rather the consequences than the causes of the wealth of England, ii. 212. Their effect in encouraging the improvement of the land, or otherwise, ii. 213. Effect of a redundancy of commercial capital in this point, ii. 215. Our commerce has not done so much for our agriculture, as our agriculture has done for our commerce, ii. 218. Different effects of the agricultural and commercial systems, ii. 220. State of England with respect to agriculture and commerce in the middle of the last century, ii. 220. Now disadvatageously changed for the predominance of the commercial system, ii. 221. Price of labor considered, on this subject, ii. 222. Different effects of the high price of corn and of rude produce, as occasioned by competition among different nations, or by that of monied wealth at home, ii. 224. To endeavor to lower the price of labor by encouraging the importation of foreign corn, would aggravate the evil, ii. 225. Precarious state of a nation depending for a considerable part of its supply of corn upon its poorer neighbors, ii. 226. Opposite condition of one in

which agricultural wealth predominates, ii. 227. No branch of trade more profitable than the sale of rude produce, ii. 228. Different circumstances of two countries; one exporting manufactures and importing corn, and the other pursuing a contrary course, ii. 228. Four very strong reasons why the exportation of corn is to be preferred to any other kind of export, ii. 230. If a bounty would turn a nation from the habit of importing corn to that of exporting it, such a measure is justifiable, (See further the article *Bounties*), ii. 233. See also the article *Plenty*.

AMERICA, period in which population has doubled itself in the northern States of, i. 6. In the back settlements, i 6. Very rapid increase of the English colonies, ii. 53, 54. Actual population of the United States, ii. 56. Hardships experienced in the first settlement of some of the English colonies, ii. 134—136. See also the article *Indians*.

ANCIENT or modern nations, question of the superior populousness of, i. 300—305.

ANDERSON, Mr.; his erroneous proposition, that every increase of population tends to increase relative plenty, and *vice versâ*, ii. 280, note.

ARABIA FELIX, practice and effect of polygamy in, i. 183.

ARABS. See the article *Bedoweens*.

ARDOUR, want of, in the men, generated by the hardships and dangers of savage life, i. 44.

ARISTOTLE saw clearly the strong tendency of population to increase beyond the means of subsistence; methods proposed by him as resources for its redundance, i. 283, 286. By limiting the age of marriage, the number of children born, and the period of procreating, i. 283. His farther observations on the necessity of regulating the number of children, i. 284, 285. Points out an error in the measures taken to increase the population of Sparta, i. 286.

ASIA, checks to population among the modern pastoral tribes of, (See the article *Tartars*), i. 144. Enumeration of checks, i. 171.

AUGSBURGH, proportion of its annual marriages to its population, i. 382

B.

BANKS; the increased circulation demanded during the late scarcity, supplied principally by the paper of the country banks, ii. 160, 161 This rather a consequence than a cause of the high price of provisions, ii. 162. It is much better that the issue should have come from the country banks than the bank of England, ii. 163. Some advantage might be derived in improving the condition of the poor, from small country banks, with a particular regulation, ii. 474.

BARBADOES, hardships experienced in the first settlement of the English colony there, ii. 136.

BARBARISM, extreme, of the inhabitants of Tierra del Fuego and of Van Diemen's Land, i. 29, 30.

BEDOWEENS: state of, with respect to the checks to population among them, i. 147, 154—160.

BEGGARS, multitude of, in Tibet, i. 243, 244. The relief given to common beggars often does not come under the appellation of charity, ii. 426.

BENEFIT CLUBS; plan of improving the condition of the poor by the compulsory and universal establishment of, considered, ii. 436—440.

BERLIN, proportion of its annual marriages to its population, i. 385.

BERNE, proofs of the powerful operation of the preventive check to population in the town and canton of, i. 416, 417.

BIRTHS; proportion of, to deaths, in Norway, i. 325. In different parts of Russia, i. 352 In England and Wales, i. 474. In France, ii. 67. In a North American state, ii. 68. Proportion of, to marriages, in England and Wales, i. 477. To the whole population in Russia, i. 358, ii. 29. In France, before and during the revolution, i. 437, 440, note. In England and Wales, i. 470. In different places of the middle parts of Europe, i. 389—394. Births in the Greek church in Russia, for the year 1799, i. 374. A greater mortality naturally produces a greater proportion of births, i 402. See also the articles *Fruitfulness*, and *Registers*.

BOUNTIES on the exportation of corn considered, ii. 237. In discussing this subject, the private interest of the farmers and proprietors should never enter the question, ii. 235. Beneficial effects of the regulations adopted in the corn-laws of 1688 and 1700, ii. 236. Great fluctuations and average of price before that time, ii. 237. Examination of the arguments of Dr. Smith in support of his assertion that the fall of price happened in spite of the bounty, and could not have happened in consequence of it, ii. 238. First, that the bounty necessarily tends to raise the money price of corn, ii. 239. Second, that the extension of the foreign market so procured, is at the expense of the home market, ii. 240, 241. Third, that the two taxes paid by the people, on account of the bounty, must either return upon the farmer by raising the price of labor, or diminish the whole market of corn by restraining the population of the country, ii. 241, 242. Fourth, that as the money price of corn regulates that of all other home made commodities, the advantage to the proprietor from the increased price is not real, ii. 245. Fifth, that the nature of things has stamped upon corn a real value, which no bounty upon exportation, no monopoly of the home market, can raise, nor any competition can lower, ii. 247. Mode in which a bounty upon exportation operates; by encouraging the farmer to grow more corn, ii. 250. By placing him on a level with the foreign grower, ii. 254. By giving a decided encouragement to the investment of capital in agriculture, ii. 255. By tending ultimately to lower the average price, and to prevent variations above and below it, ii. 256. Operation of the bounty on the value of silver, ii 259. The corn laws, by opening a larger and a steadier demand for our corn, must give a powerful stimulus to our agriculture, ii. 262. Specific evil to be apprehended from an unlimited freedom of importation and exportation, ii. 263. Speculation on the probable pernicious consequences of an importing system, ii. 266. A system of corn laws, adapted to circumstances, the only means of restoring our independence, and building our national greatness on the sure foundation of agriculture, ii. 268. General system of ploughing prejudicial, ii. 270, note. The most enlightened system of agriculture can never keep pace with an unchecked population, ii. 271.

BRAHMENS, practice of marriage among, i. 238.

BRANDENBURGH, proportion of yearly deaths and births to the population, in the small towns and villages of, i. 390, 464. Variations in the proportions of births to deaths and to marriages, at different periods, ii. 43. Churmark of; proportion of its annual marriages to its population, i 383, 384. Its general mortality, i. 392. Variations in the proportion of births to deaths and to marriages, in different periods, ii. 41, 42. Neumark of; general mortality in, i 392.

BRAZIL, Portuguese colony of; quick progress which it made in population, notwithstanding its ill management, ii. 52.
BRITISH ISLES ravaged for two centuries by the ancient northern invaders, i 137.
BROTHERS, according to the Hindoo customs, cannot marry without disgrace before the eldest, i 232. In Tibet all the brothers of a family associate with one female, i. 242.

C.

CAMPINE, in Brabant, brought into cultivation from the state of a barren and arid sand, ii 292.
CANADA, occasional famine among the nations of, i. 69.
CANNIBALISM, among the American Indians and others, i. 61, 82, 86. had its origin probably in extreme want, i. 60.
CASATSHIA tribe of Tartars; state of, with respect to the checks to population among them, i. 150.
CELIBACY powerfully inculcated in Tibet, i. 241.
CHARITY, indiscriminate, wherever it exists, will never want objects on which to exercise its bounty, i. 244 Of the direction of our Charity, ii. 420 Benevolence, like other impulses, must be frequently brought to the test of utility, ii. 420. Its pernicious effects if exercised indiscriminately, ii. 421. Such a conduct also immoral, ii. 422 The effect of charity upon the giver, is to purify and exalt the mind, ii. 423. contrary effect—of the sums distributed by the parochial laws, ii. 425 Of the subscription given in some cases to the great public institutions ii. 425 Of the relief of common beggars, ii 426 Opposite description of real charity, voluntary and active, in the relief of proper objects, ii 427. Produces daily advances in virtue, in those who practise it, ii 438 The power of giving or withholding relief, vested in parish officers and justices, very different in its nature and effect from voluntary charity, ii. 429. Beneficial consequences to the general state of the poor, of leaving charity to be voluntary, ii 430 Power and misery always increase in proportion to the quantity of indiscriminate charity, ii 431. The poor must be left to the natural consequences of their conduct with respect to industry and marriage, ii. 431 Calamities unmerited, or arising from the failure of well-founded expectations, are the genuine objects of charity, ii 432 Relief to the idle and improvident, in the severest distress, must be scanty, ii 432 Urgent distress from accidents unconnected with indolence and improvidence, not within these reasonings, ii. 433. An opportunity of doing good, however, not to be lost from a mere supposed possibility of meeting with a worthier object, ii. 434
CHASTITY, reason why the disgrace attending its breach in a woman should be greater than in a man, ii. 115—116 The virtue of chastity has a real and solid foundation in nature and reason, ii. 318 Consideration of the consequences arising to society from unchastity, compared with those of other vices, ii 346—352.
CHEAPNESS of provisions, extraordinary, in the southern parts of Siberia, i. 209.
CHECKS, ultimate, to the increase of population, is the deficiency of the means of subsistence, i 4, 13, 14 The immediate checks, i 14 These latter may be classed under the heads of *preventive* and *positive* checks, (See those articles, and their references), i. 14, 20. All re-

solvable into moral restraint, vice, and misery, i. 18, 19, 28. Proportion in which the preventive and positive checks prevail according to circumstances, i. 20 Mode of operation of the general checks described, i. 21. Checks in the lowest stage of human society, considered, i. 29. Among the American Indians, i. 41. In the islands of the South Sea, i. 79. Among the ancient inhabitants of the north of Europe, i. 111. Among modern pastoral nations, i. 144 In different parts of Africa, i. 173. In Siberia, northern and southern, i. 198. In the Turkish dominions and Persia, i 214. In Indostan and Tibet, i 226. In China and Japan, i 245 Among the Greeks, i 275. Among the Romans, i. 289 In Norway, i 307. In Sweden, i. 328. In Russia, i. 352. In the middle parts of Europe, i. 376 In Switzerland, i. 396. In France, i 426. In England, i. 453. In Scotland and Ireland, i 486 The want of food is also the most efficient cause of the immediate checks, ii. 57. In modern Europe the positive checks prevail less, and the preventive checks more, than in past times, and in the less civilized parts of the world, ii 75.

CHILDREN, sucking, buried alive with the mother at her death in New Holland, i. 37. Difficulty of rearing children in a savage life, i. 38. Frequent abandonment and destruction of them among the American Indians, i. 48 In China bound to maintain their parents, i. 253. Where property is equalized the number of children should be limited, according to Aristotle, i. 284, 285. Every child that dies under ten years of age, is a loss to the nation of all that had been expended in its subsistence, ii 478 A specific relief might, without any ill consequence, be given for every child above the number of six, ii. 484. See also the article *Infanticide;* and, for various particulars respecting the mortality of children, the article *Deaths*.

CHINA: the Moguls, after conquering its northern provinces, propose in council to exterminate all its inhabitants, i 145 Its state with respect to the checks to population, i. 245. Estimate of the number of its inhabitants, i 246. Small number of families in proportion, i. 247. Causes of its immense population; excellence of the soil, i. 247, 248. Very great encouragements given to agriculture, i 248 And to marriage, i. 253 Effects of these last; abject state of the poor, i. 256. Inquiry into the immediate checks by which this vast population is kept down to the level of the means of subsistence, i. 259. Prudential restraints, i. 260. Vicious intercourse with the sex, i. 262 Epidemic diseases, i 264 Exposure of children, and infanticide, i. 264, 265. Frequent famines, wars, and internal commotions, i. 268 Its state illustrative of the proposition, that an increase of the stock or revenue of a nation cannot always be considered as an increase of the real funds for the maintenance of labor, ii. 201—204.

CHIRIGUANES, their rapid increase on settling in the mountains of Peru, i. 63

CHRISTIANITY; the new light in which it placed our duty with respect to marriage and population, a pleasing confirmation of its truth and divinity, and of its adaption to an improved state of society, ii. 327, 328.

CIVIL LIBERTY: Effect of the knowledge of the principal cause of poverty on, ii. 367. It would powerfully contribute to the advancement of rational freedom, ii. 367. The pressure of distress on the lower classes, with their habit of attributing this to their rulers, the guardian spirit of despotism, ii. 368. A mob the most fatal of all

monsters to freedom, ii. 369. Its tendency to produce tyranny, ii. 369. The degree of power to be given to government, and the measure of our submission to it, must be determined by general expediency, ii. 373. Constant tendency in all power to encroach, ii. 374. The country gentlemen of England, in diminishing their vigilance as guardians of freedom, during the late war, actuated less by corruption, than by fear, arising from the ignorance and delusions of the common people, ii. 375. Erroneous principles of Paine's Rights of Man, ii. 375. A man cannot possess a right to subsistence when his labor will not purchase it, ii. 377. Absurd position of the Abbe Raynal on this subject, ii. 378. The general circulation of true principles on this point, would counteract the mischievous declamations on the unjust institutions of society, ii. 378. If the fear of the tyranny or folly of the people were removed, the tyranny of government could not stand, ii. 381. Ill effect of general declamations imputing all the evils of society to human institutions, ii. 381. Under the best government a great degree of misery might prevail from inattention to the prudential check to population, ii. 382. The influence of a good government is great in giving the best direction to the checks which are inevitable, ii. 384. Grand requisites to the growth of prudential habits, ii. 384. Powerful effects of a representative system of government in this respect, ii. 385. Mischievous consequences of the hopes entertained by the lower classes, of immediate relief from a revolution, ii. 386. A correct knowledge of the share attributable respectively to government, and to the poor themselves, of the unhappiness of society, would powerfully tend to promote the cause of rational freedom, ii. 386, 497.

CLEVES, dukedom of; proportion of its annual marriages to its population, i. 383.

CLIMBING TREES; vast labor in, to which the natives of New Holland are compelled for the means of subsistence, i. 32.

COLONIES, new, settled in healthy countries where room and food were abundant, have constantly made a rapid progress in population, ii. 59. See also the article *Emigration*.

COMMERCE: Of the agricultural and commercial systems. See under the article *Agriculture*.

CONDORCET, M.; his system of equality a singular instance of attachment to principles contradicted by every day's experience, ii. 77. Observations on his statement of the difficulties to be expected in the progress of his system, and on his plans for their removal; with respect to preserving the same population, ii. 80. To a future excess of population, ii. 83. To the organic perfectibility of man, ii. 85. The attempt to controvert these paradoxes not useless, ii. 95.

CORN: a nation which in average years draws but a small portion of its corn from abroad, much more precariously situated as to the constancy of its supplies, than states which draw almost the whole of their consumption from that source, ii. 197. Different circumstances of two countries; one exporting manufactures and importing corn, and the other exporting corn and importing manufactures, ii. 228—230. Four very strong reasons for the exportation of corn, ii. 230—232. If a bounty can turn a nation from the habit of importing corn to the habit of exporting it, such a regulation is justifiable, ii. 233. Consideration of that measure (See the article *Bounties*), ii. 235. See also the articles *Agriculture*, and Poor Laws (under *Poor*.)

COTTAGES; advantage to be derived in bettering the condition of the poor, from a general improvement of, ii. 472, 474, note.
COW POX. See the article *Small pox.*
COWS; plan of improving the condition of the poor by means of, and of potatoe grounds, considered, ii. 440 to 455. Benefit derived by cottagers from keeping cows, arises from its being peculiar, and would be considerably diminished if made general, ii. 463—466. Some advantage in bettering the condition of the poor might result from the adoption of this system upon a more confined plan, ii. 473, 476, 477.

D.

DANTZIC, proportion of its annual marriages to its population, i. 383.
DEATHS; proportion of, to births, in Norway, i. 325. In different parts of Russia, i. 352. In England and Wales, i. 474—476. Proportion of, to the population, in Norway, i. 308. In Sweden, i. 328. In France, before and during the revolution, i. 438, 440, note. In different places of the middle parts of Europe, i. 389. In Russia. ii. 29. In different parts of that country, and average mortality, i. 355. Average mortality in Scotland, i. 487, 488. Dependence of the marriages upon the deaths, in the middle parts of Europe, i. 377—389. Proportion of infants dying in Russia within the first year, i. 358. The registers of Petersburg give a much greater mortality of female children than of male, i. 359. Comparative mortality at different periods of life in that city, i. 360. General mortality there, i. 361. Prodigious mortality in the foundling-hospital of that city, i 361. Deaths in the Greek church in Russia for the year 1799, i 374. In countries which have been long tolerably well peopled, death is the most powerful encouragement to marriage, i. 388. No general measure of mortality for all countries taken together, if obtainable, could be of use, i. 391. In single states, the mortality will depend greatly upon the proportion of the inhabitants of towns to those of the country, i. 392. Nearest average measure, according to different writers, i. 392, 393. Average mortality of villages, i. 329, 330. A greater mortality naturally produces a greater proportion of births, i. 401, 402. In a redundant population, every effort to repress a great mortality will be vain, ii. 353—362. The average number of deaths must always depend on the average number of marriages and births, ii. 357, 358. See also the article *Registers.*
DEBAUCHERY, very early and excessive, among the negro nations of Africa, i. 175.
DEFORMED CHILDREN generally exposed among the American Indians, i. 48, 49.
DEGWESSA and DEMBEA, Abyssinian countries, destroyed by war, i. 189.
DESOLATION, instance of a very extraordinary one among the American Indians by some epidemic, i. 54.
DESPOTISM destroys the preventive check to population, ii. 283, 284.
DISEASES may be generally considered as indications that we have offended against some of the laws of nature, ii. 300. A diminished malignancy and fatality of some diseases, have been observed to be attended with an equal increase of those qualities in others, ii. 356. Such an effect must, under certain circumstances, inevitably take place from the laws of population, ii. 357. Case of the eventual ex-

tirpation of the small-pox by means of the cow-pox, considered, ii 361, 362.

DISTILLERIES; the consumption of grain in, cannot be a cause of famine, but tends entirely in a contrary direction, i. 272.

DROWNING of children, Chinese edict to prevent, i. 266, 267.

DUTHIL, Scotch parish of, affords an extraordinary instance of tendency to rapid increase, i. 495, 496.

E.

EAREEOIE societies in the South Sea islands, i. 88, 95, 97.

EASTER ISLAND; state of, with respect to the checks to population, i. 103.

EDUCATION, parochial; beneficial effects that would attend the establishment of a system of, in promoting among the lower ranks the prudential check to population, ii. 410. Among the usual topics of instruction should be impressed just principles on the subjects of population and marriage, ii. 410, 411. Advantage of adding a few of the simplest principles of political economy, ii. 411. We have been miserably deficient in the instruction of the poor, perhaps the only means of really raising their condition, ii 413. The arguments against instructing them are extremely illiberal and feeble, ii. 414. It has no tendency to create among them a spirit of tumult and discontent, ii. 415, (496, 497) Would render them less likely to be led away by inflammatory writings, ii 415, 416. Would produce great positive good in inspiring them with just notions of the causes and the nature of their condition, ii 416. Such a plan would contribute to train up the rising generation in habits of sobriety, industry, independence, and prudence, ii. 417. Would raise higher that standard of wretchedness below which mankind will not continue to marry and propagate, ii. 418. An attention to the education of the lower classes is the duty of government, ii. 419. See also ii. 473, 495.

EGYPT, the want of industry has occasioned the present low state of its population, i 193—196 Immediate causes which repress it to the level of subsistence; oppression and wretchedness, i. 196. Plague and famine, i. 197.

EMIGRATION, tends not to depopulate a country, but merely to increase the births, i 496. A certain degree of it is favorable to the population of the country quitted, ii 56 By no means an adequate remedy, but only a slight palliative, to a redundant population in the more cultivated parts of the world, ii 133. In the first peopling of new colonies, the hardships invariably greater than those suffered in the parent country, ii 134 Various instances, ii 134—138 The establishment of colonies in the more thinly peopled regions of Europe and Asia would require great resources; examples, ii. 138 A reason of frequent failure in colonization, the unsuitableness of the moral and mechanical habits of the mother country to the new-settled one, ii. 139, 140 A new colony also at first in the condition of being peopled beyond its actual produce, ii. 140. The class most affected by the redundance of population in a state, are the most unable to begin a new colony in a distant country, ii. 141 Emigration not likely to be actively assisted by governments, except where particular colonial advantages are proposed, ii. 141. Even when made most easy,

has not produced all the beneficial effects which might be expected, ii. 142 The social affections, and prudential doubts, will ever be a powerful check upon its efficacy under the most favorable circumstances, ii 143 Every resource arising from emigration must be of short continuance, ii. 144. As a partial and temporary expedient it is both useful and proper.

ENCOURAGEMENTS, direct, to population, futile and absurd, i. 158, 159, 179, 180. The customs of some nations, and the prejudices of all, operate in this way, i. 180. The reverse, however, seems to be a public object in Tibet, i. 241. Effect of encouraging the birth of children without properly providing for their support, i. 287 Positive laws for this purpose, enacted on the urgency of the occasion, and not mixed with religion, seldom calculated to succeed, i. 295. Pernicious effects of any direct encouragements to marriage, i 387—388.

ENGLAND; checks to population in, considered, i. 453. The preventive check prevails in a great degree, i. 453. Among the higher classes, i. 453. Men of liberal education, i 453. Tradesmen and farmers, i. 455 Laborers, i. 455. Servants, i 456. Results of the returns under the population act; proportion of annual marriages, i. 457. Proposal of taxes and fines on those who live single, for the support of the married poor, improper, i 458, 459 Annual mortality considered i. 460 The void made by the great mortality of London, filled by the redundant births from the country, i. 469, 470. Annual proportion of births to the population, i 470, 471. To the deaths, i. 474 To the marriages, i 477 The registry of births and deaths more deficient in the former than in the latter part of the century, i. 478. Calculations of the population from the births and deaths, not to be depended upon, i. 480, 483. Highest average proportion of births to deaths, ii 67.

EPIDEMIC, dreadful, like the small pox, in New Holland, i. 39. Instance of a very extraordinary desolation by a distemper of this kind, among the American Indians, i. 54 Epidemics have their seldomer or frequenter returns according to circumstances, i. 141, note. Their Periodical returns in different countries, ii. 59, 60 A redundancy of population among the causes of them, ii. 60, 61. A severe mortal epidemic is generally succeeded by an uncommon healthiness, ii. 64. Countries where subsistence is increasing sufficiently to encourage population, but not to answer all its demands, most subject to periodical epidemics, ii. 65 Europe less subject to plagues and wasting epidemics now than formerly, ii. 67. They indicate that we have increased too fast for the means of subsistence, ii. 301. Effects of epidemics on registers of births, deaths, and marriages See the article *Registers*.

EQUALITY, systems of; in all those proposed by different writers, the principle of population, and the difficulties arising from it, very insufficiently estimated, ii. 77. See the articles *Wallace*, *Condorcet*, and *Godwin*.

EUROPE; checks to population among the ancient inhabitants of the north of, considered, i. 111. Successive migrations of the barbarians of, i. 115. Their destructive irruptions into the Roman empire, i. 116. Into other nations, (See further the article *Germans*), i. 124 The north not more populous formerly than at present, i. 127. Error of describing it as a constant reservoir for the supply of other nations, i. 129. Cause which stopped the continuance of emigrations by land

from the north, i 135, 136. These barbarians then spread themselves over other countries by sea, i. 136, 137. Again confined to their own by a similar cause, i. 138. Objections to the supposition of these emigrations being caused by a redundant population, answered, i. 139—141. Other motives which might have prompted them, i. 142. Striking illustration which this period of history affords, of the principle of population, i. 142. War and famine the principal checks, in the countries above noticed, i. 143. Of the checks to population in the middle parts of Europe. (See the names of the different countries), i. 376. In modern Europe the positive checks less prevalent, and the preventive checks more so, than in past times, and in the less civilized parts of the world, ii. 75.

EVILS, arising from the laws of nature, always borne more contentedly than those caused by the measures of a government, i. 348, 349.

"EXISTING CIRCUMSTANCES;" estimate of this phrase, ii. 372.

EXPOSURE of children; frequent in China, from the want of means to rear them, i. 241, 265—268. The permission of this practice tends to facilitate marriage, and encourage population, i. 254, 278, 279. Practice of, among the Romans, i. 290, 292.

F.

FAMINE, among the savages of Florida, i. 67. Dreadful, in some of the negro nations of Africa, i. 190—192. Frightful picture of, in Egypt, i. 197. Frequent in Otaheite, i. 93 In China, i. 268—273. Dreadful famines to which India has in all ages been subject, i. 234—236. The consumption of grain in making spirits cannot be a cause of famine, but tends entirely in a contrary direction, i. 272. The traces of the most destructive famines are soon obliterated, ii. 58. Periodical returns of famines and dearths, ii. 59. The increase of population can never absolutely produce, but prepares the way for, famine. ii. 62, 63, 126. Reason why a famine seems almost impossible in America, ii. 71. Famine the last great check, which levels the population with the food of the world, ii. 74. See also the article *Scarcity*.

FECUNDITY of the human species would not admit of any very considerable diminution, without being inadequate to its object, ii. 310 See also the article *Fruitfulness*.

FERTILITY, extraordinary of some of the South Sea islands, i. 86 Has probably been exaggerated, i. 106. Of the southern parts of Siberia, i. 202, 203.

FLANDERS, though so often the seat of the most destructive wars, has always, after the respite of a few years, appeared as rich and as populous as ever, ii. 57, 58.

FLORIDA, famine among the savages of, i. 67.

FORMOSA, island of; its state with respect to the checks to population, i. 104.

FOUNDLING-HOSPITALS, in every view hurtful to a state, i. 343. Management of, and mortality in, that at Petersburgh, i. 361, 362. That at Moscow, i. 366. Pernicious nature of establishments of this kind, i. 367—371. Those in France, i. 442, note.

FRANCE overrun by the ancient Scandinavian nations i. 136. State of, with respect to the checks to population, i. 426. Population of, undiminished, notwithstanding the losses sustained during the revolution

i. 426. Inquiry into the manner in which such a circumstance might happen, i. 427. Proportion of unmarried persons to the population, i. 427. Absolute population before the war, i. 428. Proportion of annual marriages, i. 429. Losses during the war according to different estimates, i. 432. Increase of agriculture, i 434. Increased number of small farms, i. 436. The means of subsistence have probably remained unimpaired, if not advanced, i. 436. Annual births probably increased during the revolution, and mortality of the stationary inhabitants decreased, i 437, 438. Statements in the *Statistique Generale*, &c. lately published, i. 440, note. If the marriages have not increased, this will be accounted for by the extraordinary advance in the illegitimate births, i. 441, 442. Error of Sir Francis D'Ivernois in reasoning on the effects of the losses sustained by the revolutionary contest, i 443. The military strength, though not the numerical population, impaired by the revolution, i. 443, 444. Statements from the *Analyse des Procès verbaux des Conseils generaux de departement;* with respect to the population, i. 447, note. The state of agriculture, i. 448. The hospitals and charitable establishments, &c. i. 450. General result of these statements, i. 451. Highest average proportion of births to deaths, ii. 67. Its surplus produce greatly inferior to that of England, ii 212 General system of ploughing, as practised in most parts, prejudicial, ii. 270, note. Destructive consequences which would attend the establishment of poor laws in, ii. 405. Misery existing in, from an excess of population, ii. 440—444, 452. Source of the advantages which it enjoys, in respect to population, ii. 507—509. See also the article *Paris*.

FRIENDLY ISLANDS; state of, with respect to the checks to population, i. 99, 100, 102. Occasional scarcity in, i. 106.

FRIENDLY SOCIETIES. See the article *Benefit clubs*.

FRUITFULNESS of marriages, method of ascertaining it, ii. 1, 2. Proportion of the born which lives to marry, ii. 8 Consideration of the earliness of marriages, compared with the expectation of life, ii. 21. The proportion of births to marriages forms no criterion by which to judge of the rate of increase, ii. 23. The preventive check best measured by the smallness of the proportion of yearly births to the population, ii. 26. Rate of increase, and period of doubling, which would result from any observed proportion of births to deaths, and of these to the whole population, ii. 28 Fruitfulness of marriages at Vevey in Switzerland, i. 411. Estimate of, in different parts of Russia, i. 354. Among the women of Scotland, i. 497. See also the article *Fecundity*.

G.

GALLA, an Abyssinian nation; singular custom respecting polygamy in, i 180, 181. Their massacres in war, i 182.

GARIGANA, a village of Africa; its inhabitants all destroyed by hunger, i. 190.

GELDERLAND; proportion of its annual mortality to its population and of births to deaths, i. 394.

GENEALOGICAL History of the Tartars, savage conduct of the author of, i. 151.

GENEVA; calculation respecting the probability of life, and the mean life at, in the sixteenth, seventeenth, and eighteenth centuries, i 161.

GERMANS, ancient; their destructive irruptions into the Roman empire, i. 117—124. Their emigrations regular and concerted, i. 124—127. Their vast repeated losses of, recruited by the power of population, i. 128, 129, 130. Errors of Gibbon and Montesquieu on this point, i. 129. Their manners, as described by Tacitus, highly favorable to the principle of increase, 131, 132, 133. Rapid succession of human beings among them, i. 134, 135.

GERMANY; state of, with respect to a system of poor laws, considered, ii. 405, 406.

GODWIN, Mr.; general character of his inquiry concerning Political Justice, ii. 97. His system of equality impracticable, ii. 97. His error in attributing all the vices and misery of society to human institutions, ii. 99. His estimate of the benefits attendant upon his system of equality, visionary and false, ii. 100, 101. Opposite and dreadful picture presented by a rational contemplation of the subject, ii. 102—110. Places the difficulties arising from an excess of population, at an immeasurable distance, ii. 101. These difficulties, on the contrary, of immediate occurrence, ii. 106, 107, 109. In the state of equality supposed by him, the principal laws which at present govern civilized society would be successively dictated by the most imperious necessity, ii. 111. Administration of property, ii. 113. Institution of marriage, ii. 114, 115. Inequality of conditions, ii. 117. Thus the whole system would inevitably degenerate into a state of society not essentially different from the present, ii. 119. Observations on Mr. Godwin's Reply to the above remarks, ii. 121. They were not directed merely against the conclusion, but the principles of his work, ii. 121. The present essay *not* favorable to the promotion of vice and misery, ii. 123, 128. Mr. Godwin's system not *possibly* alone, but *certainly*, of no permanence, ii 125, 126. *Reason* why the principle of population has never yet produced the great effects noticed by Mr Godwin, ii. 125. The control of increasing population *has* been effected by vice and misery almost exclusively, ii. 127. Mr. Godwin inconsistent in speaking of the two different ratios of population and food, ii. 129, 130. His system not favorable to the preventive check to population, ii. 130. His argument respecting right to relief, considered, ii. 515

GOTHS, their irruptions into the Roman empire, i. 117, 119—125.

GOVERNMENT. See the aricle *Civil liberty*.

GREEKS; ancient state of, with respect to the checks to population, 275 Their more equal distribution of property, and the division of the people into small states, tended greatly to encourage their increase i. 274, 275. Their overflowing numbers found vent in colonization, i. 277. Infanticide sanctioned by their legislators, i. 277, 278 Measures proposed by Plato and Aristotle to prevent a redundancy of population (See their names), i. 279, 283. The positive checks among them; disease and war., i. 288. Many of the colonies from ancient Greece in the course of one or two centuries rivalled, and even surpassed, their mother cities, ii. 50.

GUINEA; disastrous failure of the attempt of the French, in 1663, to form at once a powerful colony in, ii. 136

H.

HALBERSTADT, principality of; proportion of its annual marriages to its population, i. 383. Of its annual mortality to its population, and of births to deaths, i. 394. Variations in the proportions of births to deaths and to marriages at different periods, ii. 45.

HALLE, town of; proportion of its annual marriages to its population, i. 382.

HEIR MALE, considered as an object of the first importance in the ordinances of Menu, i. 226.

HIGHLANDS of Scotland, probably more redundant in population than any other part of Great Britain, i. 128, ii. 73.

HISTORY might be made more useful if it embraced statistical subjects, i. 23, 25.

HOLLAND, proportion of annual marriages and deaths in some villages of, i. 378, 380, 384. Of annual births to the population, i. 389. The establishment of poor laws in, considered, ii. 405.

HOLSTEIN, duchy of; comparative state of the poor in, ii. 406.

HOSPITALS and charitable establishments; statements respecting the condition of, in France, i. 450. See the articles *Lying-in hospitals* and *Foundling hospitals.*

HUDSON'S BAY, famine among the Indians in the neighborhood of, i 68.

HUNTERS, tribes of, must be thinly scattered over the earth, i. 42.

HUSBANDS; several attached to one woman in a certain tribe of Indostan, and in Tibet, i. 238, 239, 243.

I.

ILLEGITIMATE births; proportions of, in France, before and during the revolution, i. 434, 442. Case of illegitimate children considered in a plan of a gradual abolition of the poor laws, ii. 391—401.

IMPROVEMENT in the condition of the poor, different plans of, considered (See under the artilce *Poor*), ii. 435. Of our rational expectations respecting the future improvement of society, ii. 487. The unhealthiness of great towns and manufactories will always operate as a positive check to population, ii. 487. Some extension of the prudential restraint from marriage is probable, ii. 488. Much good would be done by merely changing gradually the institutions tending directly to encourage marriage, and ceasing to circulate erroneous opinions on this subject, ii. 492, 493. The beneficial effects that may result from the general reasonings of this work, unconnected with the adoption of any particular plan, ii. 493. Methods in which these reasonings may operate advantageously among the higher and middle classes of society, ii. 495. Among the poor, ii. 496. The evils resulting from the principle of population have rather diminished than increased in modern times, and may reasonably be expected still further to decrease, ii. 498. General conclusion on this subject, ii. 499.

INCREASE of both plants and animals bounded only by the means of subsistence, i. 2, 3.

INDIANS, American; state of, with respect to the checks to population among them, i. 41. Their country very thinly peopled at the time of its discovery, i. 41, 42. Means by which their population was kept down to this scanty supply of food. i. 43. Want of order in their

not peculiar to the character of these people, but generated by the hardships and dangers of savage life, i. 43, 44. Unfruitfulness of the women produced by their degraded and wretched state, and other causes, i. 45, 47. Frequent abandonment and destruction of children, i. 48. This is the cause of the remarkable exemption of these people from deformities, i. 49. Polygamy allowed, but seldom practised, i. 49. Marriages not early, i. 50. Dangers attending mature age, alternate gluttony and abstinence, i. 51. Diseases, i. 52. Dreadful epidemics, and contagious distempers, i. 53 Instance of a very extraordinary desolation by some epidemic, i. 54. Their peculiar liability to pestilential diseases, from the dirt of their persons, and closeness and filth of their cabins, i. 55, 56. Perpetual and ferocious hostilities of the different nations and tribes, i. 57. Rapid increase of them under favorable circumstances, i. 64. The immediate checks to their population regulated by the means of subsistence, i. 64, 65, 66. In a view of the American continent, the population seems in general to press hard against the limit of subsistence, i. 67. Famine and scarcities among the savages of Florida, and in various other parts, i. 67—74. Some fortunate train of circumstances necessary to induce these people to adopt the pastoral or agricultural state, i. 74, 75. The causes of the rapid diminution of their numbers may all be resolved into the three great checks to population, (See the article *Checks*), i. 76. Their insatiable fondness for spirituous liquors, i. 77. Their connexion with Europeans has tended to diminish their sources of subsistence, i. 77. The average population among them is still mostly on a level with the average quantity of food, i. 78. Education of the ruder tribes, i. 109.

INDOSTAN, state of, with respect to the checks to population, i. 226. Marriage very greatly encouraged, and a male heir considered as an object of the first importance, in the ordinances of Menu, i. 226. Chastity however inculcated as a religious duty; and when strict and absolute, supersedes the obligation of having descendants, i. 228. Other circumstances which in some degree tend to counteract the encouragement to marriage;—division into classes, i. 230. Difficulty in the choice of a wife, i. 231 An elder brother remaining unmarried, confines all the other sons to the same state, i. 232. Manners and disposition of the women, i. 232. Expedients among different tribes to prevent a numerous family, i 237.

INDUSTRY; the importation of, is of infinitely more consequence to the population of a country, than the importation of new inhabitants, i 210. Industry cannot exist without foresight and security, ii. 284 If general and equal wealth fail to yield the same advantages to individuals, ii. 469.

INEQUALITY of conditions would inevitably result from a state of perfect equality, ii. 117, 118.

INFANTICIDE permitted generally in Otaheite, i. 88, 89 Contributes to increase the population of a country, i 90 Practised on the males only, by a particular tribe in India, i. 257. Chinese edict to prevent the drowning of children, i 266, 267. This practice probably originated from the difficulty of rearing children in a savage life, i. 279 Proposed in a wide extent by Plato, i. 281, 282. To make this expedient adequate in fact, it must be committed to the magistrate, and not to the parents, ii 128, note See also the article *Exposure of children*

IRELAND; state of, with respect to the checks to population, i. 509, 510. Destructive consequences which would attend the establishment of poor laws in, ii. 404, 407.
IROQUOIS, dreadful instance of a scarcity of provisions among a party of, i. 71.
ISLANDS; the great barriers to a further increase of population in, not peculiar to them more than to continents, i. 79, 80.
ISRAELITES, on settling in a fertile district of Egypt, doubled their numbers every fifteen years, ii. 51.

J.

JAPAN; state of, with respect to the checks to population, i. 273. Causes of its populousness, i. 273. Its various checks, i. 274.
JURA, Scotch island of; overflows with inabitants, in spite of constant and numerous emigrations, i. 494.

K.

KALMUCKS, destructive wars of, i. 153. Those who inhabited the fertile steppes of the Wolga; their state, and inquiry into the checks to population among them, i. 164. This was limited by want of pasture for their numerous herds, i. 165, 166. By scarcity of subsistence for themselves, i 166. By diseases, i. 166, 167. Was regulated by the season of scarcity, and not that of plenty, i. 168. And in the same manner, by the recurrence of unfavorable periods, i 169. Check from their customs respecting marriage, i. 170. Promiscuous intercourse, i. 171.
KIRGISIEN TARTARS; state of, and inquiry into the checks to population among them, i. 161. Their destructive predatory excursions. i. 162. National wars, and occasional famines, i. 163.

L.

LABOR, difference between the nominal and real price of, i. 26. ii. 164, 201, 204. Effects of producing supernumerary laborers, i. 204, 205. Reward of labor in China as low as possible, i. 256, 257. An increase in the price of labor would only contribute to raise proportionally the price of provisions, without ultimately bettering the condition of the poor, ii. 149, 157, 164. Its price, when left to find its natural level, a most important political barometer, expressing the relation between the supply of provisions and the demand for them, ii. 164, 165. A scarcity of provisions must tend to lower, instead of to raise, the price of labor, ii. 166, 167. To proportion the price of labor to the price of provisions is of the same nature as a maximum, and tends directly to famine, ii. 163. Absurdity of the common declamation "that the market price of labor ought always to be sufficient decently to support a family, and that employment ought to be found for all who are willing to work," ii. 187. Causes why the price of labor is not so readily affected by taxes and the price of its component parts, as that of other commodities, ii. 221, 222. Rise and fall of labor further considered, ii. 224, 225. If a demand for labor increase rapidly under an uncertain supply of food, the population will advance till positively checked by famine, or by disease

arising from severe want, ii. 277. Estimate of the evil arising from a market rather understocked with labor, occasioned by the prevalence of a system of moral restraint among the poor, ii. 343. The wages of labor will always be regulated by the proportion of the supply to the demand, ii. 455. See also the article *Poor* throughout.

LAND, uncultivated; the extent of, has no influence on the state of distress among the poor, ii. 288, 289. Inconsiderate conclusions often drawn against the industry and government of states, from the appearance of uncultivated lands in them, ii. 291—293. Error of bringing under cultivation too great a quantity of poor land, ii. 294.

LAND-TAX considered, ii 218, note.

LEASES; effect to be expected on, by a bounty upon the exportation of corn, ii. 260, note.

LEIPSIC, proportion of its annual marriages to its population, i. 382.

LEVEL, every thing will find its, but sometimes this is effected in a very harsh manner, ii. 236.

LEYZIN, a village of the Alps; proportion of births, and extraordinarily high probability of life in, i. 404, 405, 413.

LIBERTY. See the article *Civil Liberty*.

LIFE; calculation respecting the probability of, and the mean life, at Geneva, in the sixteenth, seventeenth, and eighteenth centuries, i. 401. Probability of, in several great cities and some villages, i. 468. In Scotland, i. 488. Extraordinarily high in a village of the Alps, i. 405, 406. Mean life, and probability of life, in several parts of Switzerland, i. 413, 414. Increased average duration of, in England and Wales, i. 473. System of M. Condorcet with respect to the indefinite prolongation of human life, examined, ii. 85—95. Longevity rare among the negro nations of Africa, i. 175, 179.

LITERARY BACHELORS; great number of, in China, i. 260, 261.

LIVERPOOL, proportion of its annual mortality to its population, i. 465

LONDON, proportion of its annual mortality to its population, i. 464—467. The void made by the great number of deaths, filled by the redundant births from the country, i. 468, 469. The effects of the dreadful plague in 1666 were not perceptible fifteen or twenty years after, ii. 58. Its effect in producing such improvements as have completely eradicated that disorder in, ii. 301, 360 Error of Sir William Petty in predicting that it would contain above five millions inhabitants in the year 1800, ii. 66.

LOVE, virtuous; its peculiar delights, and adaptation to the nature of man, ii. 304. Improved state in which this passion would exist under a system of moral restraint, ii. 319. Such a system would very greatly increase the sum of pleasurable sensations from the passion of love, ii 324.

LUXURY; its effects on the state of society, and on population, considered, ii. 479. Note in 272, and 274.

LYING-IN-HOSPITALS, probably rather prejudicial than otherwise, i. 343.

M.

MAGDEBURGH, dukedom of; proportion of its annual marriages to its population, i. 383. Variations in the proportions of births to deaths, and to marriages, at different periods, ii. 44.

MAMELUKES, their oppressive and destructive government, i. 134

MANCHESTER, proportion of its annual mortality to its population, i. 465.

MANUFACTURES; attempts to employ the poor in, on any great scale, have almost invariably failed, ii. 183. Unfavorable state of the poor employed in manufactories, with respect to health and other circumstances, ii. 193—196. See also the article of Agricultural and Commercial Systems, (under *Agriculture.*)

MARIANNE islands; state of, with respect to the checks to population, i. 104.

MARRIAGE; practice of, in Otaheite, i. 91. Very greatly encouraged in the ordinances of Menu, i. 226, 227. And in China, i. 253. Apparent results in the former instance, i. 233. In the latter, i. 255—259. Pernicious effects of any direct encouragements to marriage, i. 387—389, ii. 443. The prevailing customs, manners, and prejudices of society, operate injuriously on this point, ii. 364—366 The practice of mankind on the subject has universally been much superior to their theories, ii. 490. Origin of the prejudice in favor of an indiscriminate encouragement to marriage, ii. 326. Inference from St. Paul's declarations respecting marriage, ii. 327. Limitations to the age of marriage, proposed by Plato and Aristotle, i. 281, 283. The institution of marriage, or something nearly equivalent to it, would soon result from a state of perfect equality, and of unrestrained commerce of the sexes, ii. 116, 117. The desire of marriage would not admit of any very considerable diminution, ii. 313. Beneficial effects to be produced by later marriages under a system of moral restraint, considered, ii. 321. This restraint among the poor themselves, the only effectual means of bettering their condition, ii. 331—342 Consideration of the effect which might be produced by a diminished mortality, in decreasing the number of marriages, ii. 359. Among the higher ranks, little more is wanted with regard to the prudential check to marriage, than an increased degree of respect and of personal liberty to single women, ii. 408. Among the lower classes, the same object would be attained by the establishment of a proper system of parochial education (See the article *Education*), ii. 410. The prudential restraint from marriage has increased throughout Europe, ii. 489. See also the articles *Fruitfulness, Prudential* and *Moral* Restraint, and *Polygamy.*

MARRIAGES; proportion of, in Scotland, i. 489. In Norway, small, cause of this, i. 309—316. In the Pays de Vaud, very small, i. 415. Proportion of, to the whole population; in Russia, i. 358. In England and Wales, i. 457 Proportion of, to births, ii. 8—26. In England and Wales, i. 477. Dependence of marriages on deaths, i. 377—389. Number of marriages in the Greek church in Russia for the year 1799, i. 374. Of annual marriages in France before the war, i. 429. See also the article *Registers.*

MAXIMUM sometimes established in the Turkish dominions, i. 220. To regulate the price of labor by the price of provisions is of the same nature as a maximum, and both measures tend directly to famine, ii. 167, 168.

MEAT; a large subscription for the poor would only raise the price of, without enabling them to procure an increased quantity, ii. 149, 150

MENU, extracts from the ordinances of, i. 226—235.

MEXICO, frequent scarcity of provisions in, i. 71, 72. Quick progress which the Spanish colony made in population, notwithstanding its ill management, ii. 51, 52. Cruelties of the first settlers. ii. 134

MIGRATIONS of mankind, the early, considered, i. 111—115. Of the ancient Germans, regular and concerted, i. 125—127.

MIRI, or general land tax paid to the sultan; moderate in itself, but made oppressive and ruinous by the agents of government, i. 214—217.

MISERY, checks to population which come under this head, i. 19.

MOB, the most fatal of all monsters to freedom, ii. 369. Its tendency to produce tyranny, ii. 369. The dread of it caused the late surrenders of the privileges of the people to the government, ii. 371.

MOGULS, after conquering the northern provinces of China, proposed in council to exterminate all its inhabitants, i. 145. Their destructive wars, i. 153.

MONEY cannot be made the means of raising the condition of the poor without proportionably depressing others, ii. 151, 152. May confer particular, but not universal, assistance to them, ii. 469. See also the article *Banks*.

MORAL CODE; it is no valid objection against the publication of one, that it will never be universally practised, ii. 331.

MORAL RESTRAINT defined, i. 18. Of our obligation to practise this virtue, ii. 297. It is certainly the best of all the immediate checks to population, ii. 298. The opinions respecting population originating in barbarous ages, have prevented us from attending to the dictates of reason and nature on this subject, ii. 298. The evil arising from excessive indulgence of the passions, an admonition for their due limitation, ii 299. The consequences of increasing too fast, though not immediately connected with the conduct leading to them, are obligatory as to prescribing our duty, ii. 299. Diseases are indications that we have offended against some of the laws of nature, ii. 300. Thus epidemics point out that we have increased too fast for the means of subsistence, ii. 301. Evil effects of an irregular gratification of the passions, ii. 302. A diminution of the pleasure arising from their gratification, would however produce a much greater increase of gain to general happiness, ii. 303. Peculiar delights of virtuous love, ii. 304. The passion between the sexes operates permanently on human conduct, ii. 305. Has the most powerful tendency to refine and meliorate the character, ii. 305. Is strongest, and has most beneficial effects, where obstacles are thrown in the way of virtuous and universal gratification, ii. 307. The evil resulting from an irregular indulgence, must not be diminished by the extinction or diminution of the passion itself, ii. 308. In this and all the other passions it is only the regulation or direction of them that is wanted. The province of reason is the guidance not the suppression of the passions, ii. 310. The fecundity of the species would not admit of any considerable diminution, ii 310. Nor would the desire of marriage, ii. 313. Moral restraint rests upon the same foundation as the obligation to practise any of the other virtues, ii. 314. Of the evils which would result to society from the prevalence of this virtue, ii. 315. Removal of any imputation on the goodness of the Deity in calling beings into existence by the laws of nature, which can only those laws be supported in existence, ii. 315. The subjection of the passions a principal requisite to happiness, ii. 316. Beneficial effects of a society exhibiting a great prevalence of the principle of moral restraint, ii. 316. In such a condition, the period before marriage must be passed in strict chastity, ii. 318. Purity of intercourse

tween young persons in these circumstances, ii. 319. Later marriages would prolong the period of youth and hope, and lead to fewer ultimate disappointments, ii. 320, 321. The most eligible age for them must depend entirely on circumstances and situation, ii. 322. Objection from the difficulty of moral restraint answered, ii. 323. This system would very greatly increase the sum of pleasurable sensations from the passion of love, ii. 324. Might be expected to repress the frequency of war, ii. 325. Great strength of such a state of society in a war of defence, ii. 328. Conclusion: the justice of the Deity unimpeachable, in making this virtue necessary by his general laws, ii 329. This is the only effectual mode of bettering the condition of the poor, ii. 331—342. Consideration of the objection to this measure, that by endeavoring to urge this duty on the poor, we may increase the quantity of vice relating to the sex, ii. 345—352. See also the article *Prudential Restraint.*

MORTALITY; order of, extremely variable, i. 308. Division of the states of Europe into classes in this respect, i. 394. Annual mortality in England and Wales considered, i 460—474. Different proportions of, in towns and in villages, i. 465 See also the article *Deaths.*

MOSCOW, management of the foundling-hospital at, i. 366.

MOWING; perfection of the art of, in Switzerland and Norway, i. 418.

N.

NATIONAL DEBT, point in which it has been most injurious, ii. 216.

NATURE; constancy of the laws of, the foundation of all human knowledge, ii. 88.

NAYRS, their practice with respect to the commerce of the sexes, &c. i. 238, 239.

NEGRO NATIONS of Africa; their habits, powerful checks to population, i. 174. Constant wars, and want of industry, i. 174. Shortness of life among them, i. 175, 189. Practice of marriage, i. 176. Great and constant exportation of slaves, i. 177. The population, notwithstanding all these circumstances, continually passing beyond the means of subsistence, i. 177, 178. Practice of polygamy, and its effects considered, i. 180. Diseases, i. 185. Poverty, bad diet, and want of cleanliness, i. 185. Dreadful instances of famine, i. 190.

NEW CALEDONIA, occasional scarcity at, i. 107.

NEW ENGLAND, hardships experienced in the first settlement of this colony, ii. 135.

NEW HOLLAND; state of the natives of, with respect to the checks to population, i. 31. Scarcity of food, i. 32. Cruel treatment of their women, and early union of the sexes, i. 34, 35. A great part of the women without children, i. 36, 37. Sucking children buried alive with the mother at her death, i. 37. Difficulty of rearing children, i. 38. Wars between different tribes, and perpetual private contests; manner of living; and dreadful epidemic, i. 38, 39. Still the population keeps up to a level with the average supply of food, i. 39, 40. Hardships experienced in the first settlement of the colony of Port Jackson, ii. 137.

NEW ZEALAND; state of, with respect to the checks to population, i. 81. Perpetual hostility of the different tribes, and their cannibalism i. 82. The population, nevertheless, seldom repressed below the average means of subsistence, i. 85.

NEWBURY, proportion of its annual mortality to its population, i. 469.
NOOTKA SOUND, frequent scarcity of provisions at, i. 73, 74.
NORTH OF EUROPE. See the articles *Europe*, and *Germans*.
NORTHAMPTON, proportion of its annual mortality to its population, i. 465.
NORWAY; state of, with respect to the checks to population, i. 307. Its mortality small, yet its population has not rapidly increased, i. 308. The preventive checks proportionably great, i. 309. Causes of the small number of marriages, i. 309. Unfavorableness of the soil and climate, i. 316. The preventive check contributes considerably to the smallness of the mortality, i. 317, 318. Obstacles to improved cultivation of the land, i. 319. Recent advances, however, both in that respect and in population, i. 323. The woods are cleared away too precipitately, without consideration of the probable value of the land when cleared, i. 340. This country might *possibly* have been better peopled formerly than at present, but the supposition not *probable*, i. 341. Proportion of its yearly births to the population, i. 390. State of the poor better in many respects than in England, ii. 406.
NORWICH, proportion of its annual mortality to its population, i. 465.

O.

OBJECTIONS, general, to the principles and reasonings of this essay, answered, ii. 503. First, that they contradict the original command of the Creator, to increase and multiply and replenish the earth, ii. 504. That the natural checks to population will always be sufficient, without resorting to any other aids, ii. 510. Respecting the practicable increase of population, ii. 511. Respecting the abolition of the poor-laws, ii. 519. That every practicable benefit may be obtained by improved measures of civil policy, without risking the danger of promulgating new opinions which may alarm the prejudices of the poor, ii. 548. Respecting the feelings of despondency in some, who lament a conviction of the truth of the principles of this essay, ii 551.
OHEITAHOO, temporary scarcity at, i. 106.
ORGANIC perfectibility of man; M. Condorcet's system respecting, unwarranted, ii. 85—94.
OSCILLATIONS in population, in civilized and in savage life, i. 21—27.
OSTIACKS, their disgusting mode of living, i. 200.
OTAHEITE, its luxuriance extremely favorable to population, i. 86 Some very powerful checks must be traced in the habits of the people, i. 88. Enumeration of these; Eareeoie societies, i. 88. Infanticide permitted to all classes, i. 89. Extensive debauchery and promiscuous intercourse, i. 90. Customs with regard to marriage, and changing of connexions, i. 91. Frequent and destructive hostilities, i. 92. Human sacrifices, and disorders, i. 93. Even these checks have not always kept down the population to the level of the means of subsistence, i. 93. Mode of living of the different ranks, i 94. Extraordinary depopulation since captain Cook's last visit, i. 96. The population at present repressed considerably below the average means of subsistence, i. 97. Its fertility probably exaggerated, i. 106.

P.

PACHAS, their destructive extortion in their provinces, i. 218, 219.
PAINE, Mr.; erroneous principles of his Rights of Man, ii. 375—384.
PARAGUAY, occasional scarcity of provisions in, i. 72.
PARIS, proportion of its annual marriages to its population, i. 385. Of annual births and deaths to the population, in several villages around, i. 390.
PARISH pay table, disgusting picture of, ii. 427.
PASSIONS, evil effects of an irregular indulgence of, ii. 302. A diminution of the pleasure arising from their gratification would produce a much greater loss than gain to general happiness, ii. 303, 304. The passion between the sexes operates permanently upon human conduct, ii. 306. Has the most powerful tendency to soften and meliorate the character, ii. 306. Is strongest, and has most beneficial effects, where obstacles are thrown in the way of very early and universal gratification, ii. 307. The evil resulting from its irregular indulgence must not be diminished by the extinction or diminution of the passion itself, ii. 308. In this and all the other passions, it is only the regulation or direction of them that is wanted, ii. 309.
PASTORAL nations, modern; state of, with respect to the checks to population (See the article *Tartars*), i. 144. Enumeration of checks, i. 171, 172. Limits to the population of a country strictly pastoral, i. 417 Natural excitement which it supplies to emigration, i. 420. See also the article *Shepherds*.
PAYS DE VAUD, various statistical particulars respecting, i. 401, 413—415.
PEASANT, Swiss; remarkable instance of one possessing a clear comprehension of the subject of population, i. 421—424.
PERFECTIBILITY of man; M. Condorcet's system respecting, examined. ii. 80—95.
PERSIA; state of, with respect to the checks to population: the dreadful convulsions in, have been fatal to agriculture, i. 224. Small-pox, and other causes, i. 225.
PERU; quick progress which the Spanish colony made in population notwithstanding its ill management, ii. 51, 52. Cruelties of the first settlers, ii. 134.
PLAGUE, its ravages in the Turkish dominions, i. 222. A constant admonition to the people against their filth and torpor, ii. 301. Does not effectually repress the average of population, ii. 58. See also the article *Epidemics*.
PLATO, measures proposed by him to regulate population, i. 279. By encouraging, or checking it by means of honors and of marks of disgrace, i. 280. By burying the children of the inferior citizens, and all born imperfect, i. 280, 281. By limiting the age of marriage and of bearing children, i. 281. He thus evidently saw the strong tendency of population to increase beyond the means of subsistence, i. 282. Inconsistencies in his plan observed by Aristotle, i. 284, 285.
PLENTY: On the prevailing errors respecting this subject as connected with population, ii. 275. Error of supposing that an increase of population in any state not cultivated to the utmost, will tend to augment the relative plenty of the whole society, ii. 275. An increase of popu-

lation arising from the improving state of agriculture, very different from its unrestricted increase, ii. 276. If a demand for labor increases rapidly though the supply of food be uncertain, the population will advance till positively checked by famine, or diseases arising from severe want, ii. 278. Scarcity and extreme poverty may or may not accompany an increasing population, but must necessarily accompany a permanently declining population, ii. 278. The prejudices respecting population strikingly resemble the old prejudices about specie, ii. 281. Ignorance and oppression will constantly cause a low state of population, in spite of the birth of any number of children annually, ii. 283, 284 Agriculture may more properly be termed the efficient cause of population, than population of agriculture, ii. 285, 286. Revenue the source of population, and not population of revenue, ii. 287. Waste among the rich, or land remaining uncultivated, do not influence the average distress of the poor, ii. 288. Inconsiderate conclusions often drawn against the industry and government of states, from the appearance of uncultivated lands in them, ii. 290. Error of bringing under cultivation too great a quantity of poor land, ii. 293. The question is not whether the produce of the earth may be absolutely increased, but whether it may be increased so as to keep pace with an unchecked population, ii. 295.

PLOUGH in Syria, often only the branch of a tree, i. 217.

PLOUGHING; general system of, as practised in most parts of France, prejudicial, ii. 270, note.

POLITICAL ECONOMY, great importance of the diffusion of its principles; they should at least form a branch of university education, ii 411 and note.

POLITICAL JUSTICE, general character of Mr. Godwin's work on, ii 97. See the article *Godwin*.

POLYGAMY allowed, but seldom used, among the American Indians, i 49. Its effect on population considered, i. 181—184. In some negro nations of Africa, sought by the wife and not the husband, i 189. In the Turkish dominions, less productive even in individual families than monogamy, i. 221. Tends to degrade the female character; and by being practised among the superior classes, renders it difficult for the lower classes to obtain wives, i. 232, 233, 176. For the opposite custom, see the article *Husbands*.

POMERANIA, general mortality in, i. 392. Proportion of second marriages, ii. 6. Variations in the proportions of births to deaths and to marriages at different periods, ii. 42.

POOR: measures respecting their relief in Switzerland, and effect of these, i 424. Support of, in Scotland, i. 499. Remarks by Scotch writers, on the state of the poor in England, i. 500, 501. Of poor laws: those of England, though they may have alleviated individual misfortune, have spread the evil over a larger surface, ii 148. Causes why, notwithstanding the immense sum annually collected for the poor, so much distress still exists among them, ii. 148. A subscription for the poor would only increase proportionably the price of provisions, ii. 149 Even if the produce of the country were augmented by that means, a more than proportionate increase of population would follow, ii. 150. No possible sacrifices of the rich could for any time prevent the recurrence of distress among the lower classes, ii. 151. The condition of some of the poor cannot be raised by means of money without proportionally depressing that of others, ii

151, 152. Confirmation of these reasonings, from the late scarcities, ii. 153. The price of corn in a scarcity will depend more upon the degree of consumption than of the actual deficiency, ii. 154. High prices certainly diminish consumption, ii. 154, 155. The bounties to the poor during the late scarcities operated very powerfully in raising the price of grain, ii. 157. Effect of these also in increasing the circulating medium, ii. 159. This increase principally supplied by the country banks, ii. 160. Very great obstacles thus thrown in the way of returning cheapness, ii. 162. These less, however, than if the increased circulation had come from the bank of England, ii. 163. The scarcity fortunately followed by an abundant harvest and a peace; a rapid fall of prices thus occasioned, ii. 163. Permanent bad consequences which would have followed from raising the wages of labor during the scarcity, ii. 164 The price of labor a most important political barometer, expressing the relation between the supply of provisions and the demand for them, ii. 164. A scarcity naturally tends to lower, instead of to raise, the price of labor, ii. 166. To proportion the price of labor to that of provisions is of the nature of a maximum, and tends directly to famine, ii. 167. An increase of population without a proportional increase of food, must lower the value of each man's earnings, ii. 170, Ways in which the poor laws tend to depress the general condition of the poor, ii. 171. They weaken the disgrace which ought to attend dependent poverty, ii. 172, 174. Have contributed to raise the price of provisions, to lower the real price of labor; and to generate a carelessness and want of frugality among the poor, ii. 172, 173. Subject the whole class of the common people to a set of tyrannical laws, ii. 175. If they had never existed, the mass of happiness among the common people would have been greater than it is, ii. 176. All systems of the kind tend in effect to create more poor, ii. 176. Examination of the principle and operation of the famous statute of the forty-third of Elizabeth, ii. 177. Its due execution as a permanent law is a physical impossibility, ii. 180. Checks to the increase of the poor, from a spirit of independence and pride among the peasantry, and from the contradictory operation of the poor laws themselves, ii. 181 From an increased mortality among them, occasioned by the action or the ill execution of these laws, ii. 182. The poor laws have destroyed many more lives than they have preserved, ii. 183. Attempts to employ the poor on any great scale in manufactures have almost invariably failed, ii. 183. This reasoning not to be applied against every mode of employing them on a limited scale, and with proper restrictions, ii. 186. Absurdity of the common declamation on the subject of the poor, ii. 187. Of increasing wealth as it affects the condition of the poor, (See the article *Wealth*), ii. 188—205. Of the only effectual mode of improving the condition of the poor, ii. 331. Almost all that has hitherto been done for the poor, has tended to throw a veil of obscurity over the causes of their distress, ii. 335. Till such erroneous ideas have been corrected, it cannot be said that any fair experiment has been made with their understandings, ii. 336. They are themselves the principal authors of their own poverty, and the means of redress are in their hands alone, ii. 337. To urge people to marriage when they have little chance of being able to support their children, is rashly to tempt Providence, ii. 338. To encourage the married poor, and thus increase the number of laborers, has in the experience of many centuries, constantly failed to improve their con-

tion, ii. 339. It is time to try the contrary method, of withholding the supply of labor, and thus proportioning the population to the food. ii. 339. The absolute quantity of food to be still increased by every means, and thus its relative superiority to the population established. ii. 341. The result of these reasonings to be inculcated on the poor, and thus their true situation explained to them, ii. 341. Objections to the above mode considered, ii. 343. First, a market rather understocked with labor, ii. 343. Second, the diminution of population that it would cause, ii. 344. Third, that by endeavoring to urge the duty of moral restraint, we may increase the quantity of vice relating to the sex, ii. 345. Of the consequences of pursuing the opposite mode, ii. 353. Every effort to repress a great mortality would be vain, ii. 355, 357. Consideration of the effect which might be produced by a diminished mortality, in increasing the population, or in decreasing the number of marriages, ii. 359. Of the consequence of a possible extirpation of the small-pox by means of the cow-pox, ii. 362. It is sufficient to leave every man to his free choice respecting marriage, which however is very far from being the case at present, ii. 364. Among the lower classes, the poor-laws and private benevolence operate as a direct encouragement, ii. 364. Among the higher classes the existing manners, and in all ranks the prevailing prejudices, have the same tendency, ii. 364. Plan of a gradual abolition of the poor laws, ii. 388. Extraordinary proportion of paupers in this country, ii. 388. Objection to a specific limitation of the rate to be raised for their relief, as a mode of diminishing their number, ii. 389. In adopting a system for the gradual abolition of these laws, the *right* of the poor to support must be previously and formally disclaimed, ii. 390. Objections to this disavowal, answered, ii. 519—532. Measure for that purpose; future children born beyond a certain period, to be declared debarred from parish assistance, ii. 391. The liberty of marrying, at any age, on no account to be infringed, ii. 393. The sphere for the exercise of private benevolence would be less after such a regulation than now, ii. 394. Case of illegitimate children under these circumstances, ii. 394. Not more eligible at present, ii. 395. Frequency of their desertion by their parents, ii. 396. If no provision were made for them by the laws in such a situation, the ties of nature would be strong enough to retain the parents in their duty, ii. 397. Pernicious custom of frightening the father of an illegitimate child into marriage by the terrors of a jail, ii. 397. The most powerful obligation on every man to support his children, would be the knowledge that they must depend solely on this support, ii. 398. Objection that a mother and her children should not thus suffer from the misconduct of the father, answered, ii. 399. Unoppressive extinction of the poor rates by this plan, ii. 401. The superiority in the state of the poor in England, exists in spite, and not in consequence, of the poor laws, ii. 402. Destructive consequences which would attend the establishment of a system of parochial relief in many of the other countries of Europe ii. 404—407. Objections of Mr. Young to the above plan, and his own plan for the relief of the poor considered, ii. 519—529 Different plans of improving the condition of the poor, considered, ii. 433. None must tend directly to encourage marriage, ii. 435 Sir James Steuart's plan; of a general establishment of foundling-hospitals, and of public support to the children of some married persons, ii. 435 Mr. Townsend's; of a compulsory and universal institution of [illegible]

clubs, ii. 436. Mr. Young's; by means of potatoe-ground and cows, ii. 440. Desideratum with respect to the habitual food of the common people, ii. 456. Of the necessity of general principles on the above subject, ii. 461. Distinction between mischievous and genuine theory, ii. 461. Advantage derived by cottagers from keeping cows, arises from its being peculiar, and would be considerably diminished if made general, ii. 463. Measure of relieving the poor at their own homes, and placing out their children as soon as possible, cannot be practised universally, ii. 467. The benefits conferred by money, and even by industry, are relative, and would fail if not confined to particular instances, ii. 468, 469. Objection to these reasonings answered; in many cases the good from the relief of present distress may overbalance the probable evil from the remote consequence, ii. 470. Great advantages might be expected from a better and more general system of education. (See also the article *Education*), ii. 471. From a general improvement of cottages, ii. 472. From the cow system, (ii. 440, seq.) upon a more confined plan, ii. 473, 476, 477. Objection that the above measures would encourage population, answered, ii. 477. Effects of luxury on the state of society, and on population, considered, ii. 479, (note in 271 and 273.) Our best grounded hopes of improvement in the general mass of happiness founded on a diminution in the number of the lowest, and an increase in that of the middle classes of society, ii. 482 This to be brought about only by the prevalence of prudential habits respecting marriage among the poor, ii. 484. A specific relief might be given for every child above the number of six without any bad effect, ii. 484. Objection that the general prevalence of the prudential restraint among the poor might occasion an injurious advance in the price of labor, answered, ii. 485. See also the articles *Charity* and *Poverty*.

POPULATION has a constant tendency to increase beyond the means of subsistence, i. 2, 4. This evidently seen in its full strength by Plato, Aristotle, and other philosophers, i. 282, 283, 286, 287. Period in which it doubles itself; in the northern states of America, i. 6. In the back settlements, i. 6. Other possible periods, i. 7. Increases thus in a geometrical ratio, i. 8. The increase of subsistence cannot exceed an arithmetical ratio, i 8. 12. Effects of these two ratios of increase when brought together, i. 12. Population can only be kept down to its level by the strong law of necessity. (See the article *Checks*), i. 13. Propositions intended to be proved in the present essay, i. 27, 28. Distinction to be carefully made between a redundant population, and a population actually great, i. 127, 133, 140. Can never increase with great rapidity but when the price of labor is very high, i. 213. General deductions from a view of society in ancient and modern states, ii. 50. Comparatively rapid increase which has invariably taken place whenever the checks to population have been in any considerable degree removed, ii. 50. Instanced in the case of new colonies, ii. 50. The most destructive wars, plagues, and famines, have but a very temporary influence on the average population of countries, ii. 58. Effect of a superabundant population in producing, or aggravating the ravages of epidemic disorders and famines, i. 59. Severe mortal epidemics generally succeeded by uncommon healthiness, ii. 64. No estimate of future increase or decrease can be depended upon from any existing rate, ii. 66. The only true criterion of a real permanent increase in any country, is the increase of the means of subsistence, ii.

70. Countries are populous according to the quantity of human food which they produce or can acquire, and happy according to the liberality with which this food is divided, ii. 72. A country left to its own natural progress in civilization, could never be said to be free from distress for want of food, ii. 73. Famine is the last resource of nature against an excess of population, ii. 74. Conclusion from the whole; the three propositions proved which were announced (i. 27, 28,) in the outset, ii. 74, 75. A sudden start of population from two or three years of plenty, invariably a most fruitful source of misery, ii. 244. On the prevailing errors respecting population and plenty (See the article *Plenty*), ii. 275. Of the modes of correcting the prevailing opinions on population, ii. 408. This can only be done by circulating juster notions on the subject, ii. 408. In the higher ranks, little more is wanted than an increased degree of respect and of personal liberty to single women, ii. 408. Among the lower classes, the same object would be attained by the establishment of a proper system of parochial education. (See the article *Education*), ii. 409. See also particularly the articles *Encouragement*, *Improvement*, and *Objections*.

POPULOUSNESS of ancient or modern nations, question respecting the superiority of, i. 296—306

POSITIVE CHECKS to population enumerated, i. 18, 19.

POTATOE-GROUND; plan of improving the condition of the poor by means of, and of cows, considered, ii. 440—455.

POVERTY, miserable, among some of the negro nations of Africa, i. 185, 186. Abject, in China, i. 255—258. When hopeless, ceases to operate as a spur to industry, ii. 284. Its powerful influence in producing vice of every sort, ii. 347—352. Effect of the knowledge of the principal cause of, on civil liberty. See the article *Civil liberty*.

PREVENTIVE CHECK to population described, i. 15. If it do not produce vice, is the least evil that can arise from the principle of population, i. 16. Consequences when it does produce vice, i. 17. Moral and vicious branches of this check, i. 18, 19. More prevalent in the states of modern Europe than in past times or among uncivilized nations, and at present the most powerful of all the checks, ii. 79, 7. Preferable to all other checks; mode in which it might be rendered more operative, ii. 130—132. Effectually destroyed by ignorance and despotism, ii. 283. Those countries where it most prevails are at the same time most distinguished for chastity, ii. 491

PROLIFICNESS. See the article *Fruitfulness*.

PROPERTY; an equal distribution of, highly favorable to the increase of population, i. 255, 275. Where it is equalized, the number of children should be limited, according to Aristotle, i. 284, 285. Something like the present administration of property would result from a state of perfect equality, ii. 109—113.

PRUDENTIAL RESTRAINT defined, i. 18, note. Objection that the more general prevalence of this restraint among the poor might occasion an injurious advance in the price of labor, answered, ii. 3. Foundation of our expectations respecting the extension of this check to marriage, ii. 488—492. See also the article *Moral restraint*.

PRUSSIA, general mortality in, according to different writers, i. 3. Proportion of second marriages in Prussia and Silesia, i. 7. See also the article *Silesia*, and names of other parts

Q.

QUITO; rapid progress which the Spanish colony here made in population, notwithstanding its ill management, ii. 51, 52.

R.

RAYNAL, Abbe; his absurd position on the right of man to subsistence, ii. 378.

REDUNDANT population, very distinct from a population actually great, i. 128, 133, 140. Cause why poor, cold, and thinly-peopled countries, tend generally to a superfluity of inhabitants, i. 141.

REGISTERS of births and deaths must always afford very uncertain data for estimating the population, i. 483 Those of the above description in England and Wales, more deficient in the former than in the latter part of the last century, i. 478, 479. In most countries the omission in the births and deaths is greater than in the marriages, ii. 1. Effects of epidemics on registers of births, deaths, and marriages, considered, ii. 32. Table on [illegible] subject, ii. 33. Observations on the above table; the number of marriages very nearly doubled in the year after a plague, ii. 34. Fruitfulness of marriages after that period, ii. 37. Variations in the proportions of births to deaths in the different periods, ii. 38. Mortality after the plague, ii. 39. Several examples of the continual variations in the proportions of the births and marriages, as well as of the deaths, to the whole population, ii. 41—45. The least variable proportion is that of the births to marriages, ii. 46. Effects of the common epidemical years, ii. 47, 48.

RENT determined by, and not determinative of, price, ii. 263.

REPRESENTATIVE system of government, its powerful effect in favoring the prudential check to population, ii. 385.

RESTRAINT. See the articles *Moral* and *Prudential* restraint.

RETIREMENT, religious; frequent and strict, in Tibet, i. 242.

REVENUE the source of population, and not population of revenue, ii. 287.

REVOLUTION; mischievous effects of the hopes entertained by the lower classes, of immediate relief from, ii. 386. The circulation of just principles respecting population among them, would destroy such expectations, ii. 497.

RIGHT of the poor to support should be formally disclaimed, ii. 390. Objections against this disavowal, answered, ii. 519, 552.

"RIGHTS OF MAN," erroneous principles of that work, ii. 375, 383.

ROMAN EMPIRE, its fall occasioned by repeated inundations of barbarians from the north of Europe, i. 116—123.

ROMANS; state of, with respect to the checks to population, i. 289. Destructive ravages of war during their first struggles for power, repaired by the principle of increase, i. 289. Practice of infanticide in early times, and its effect, i. 290. The abolition of the comparative equality of property, produced a great decrease in the number of citizens, i. 291. The *jus trium liberorum* ineffectual in adding to the population, i. 292, 293. Vicious habits of every kind prevalent, i. 294. The Roman world not most populous during the long peace under Trajan and the Antonines, i. 296. Question of the superior

populousness of ancient or modern nations, i. 300. Comparative efficacy of the preventive and the positive checks among the Romans, i. 306.

RUSSIA; state of, with respect to the checks to population, i. 352 Extraordinary results of the lists of births, deaths, and marriages, i 352. Proportion of births to deaths in different districts, i. 352. Of marriages to births, i. 354. Of deaths to the population, i. 355, 390, 391 Of births to the population, i. 358, 390, 391. Of infants dying within the first year, i. 358. Of yearly marriages, to the population, i. 358. The registers of Petersburgh give a much greater mortality of female children than of male, i. 359. Comparative mortality at different periods of life in Petersburgh, i. 361. General mortality there, i. 361. Management of its foundling hospital, and mortality in it, i. 362. Of that at Moscow, i. 366. Pernicious effects of these establishments, i. 367. Principal obstacle to a rapid increase of population, the vassalage of the peasants, i 371 A very considerable advance both of cultivation and of population made during the reign of the late empress and since, i. 373. State of the population at different periods, i. 374. Births, deaths, and marriages, in the Greek church, for the year 1799, i. 374. Comparative proportion of the marriages and the deaths, i. 381.

S.

SACRIFICES, human, at Otaheite, i. 93.

ST. CERGUE, parish of; proportion of its marriages to births, and of the latter to the population, i. 408. Of its births to deaths, i. 410 Habit of emigration there, i. 411.

ST. DOMINGO, Indians of; neglected purposely to cultivate their lands, in order to starve out their oppressors, i. 77.

ST. PAUL, inference from his declarations respecting marriage, ii. 327

SAMOYEDES, their mode of living, i. 201.

SANDWICH ISLANDS; state of, with respect to the checks to population, i. 99, 100, 101. Occasional scarcities at, i. 106, 107.

SAVAGE LIFE, mode in which the oscillations in population are produced in, i. 26. Difficulty of rearing children in, i. 38. Want of ardor in the men, generated by the hardships and dangers to which they are necessarily subject, i. 44. The general characteristic of savages, to despise and degrade the female sex, i. 46. The period of life shorter among savages than in civilized countries, i. 52 Savages are rendered liable to pestilential diseases by the dirt of their persons, and the closeness and filth of their cabins, i. 55 Comparative advantages and disadvantages of savage and of civilized life, i. 108—110. See also the article *Barbarism*.

SCANDINAVIANS, ancient. See the article *Goths*. Spread themselves by sea over various nations of Europe, i. 136, 137. Different prevalence of the preventive check to population in ancient and in modern Scandinavia, i. 138.

SCARCITY of food the ultimate check to population, i. 2, 4, 13, 14. Illustrated, i 21. Horrid, in Tierra del Fuego and Van Diemen's land, i. 29, 30. In New Holland, i 32, 33. Various instances of, among the American Indians, i 68—73. Among the New Zealanders, i 85 Among the Kalmuck, who inhabited the fertile steppes of the Wolga, i 166 Among the negro nations of Africa, i. 176 Frequent

in Northern Siberia, i. 198—200. In Sweden in 1799, i. 347. Instances of, in Scotland, i. 504—508. It may or may not accompany an increasing, but must necessarily a permanently declining, population, ii. 278. See also the articles *Famine*, and Poor Laws, (under *Poor*.

SCOTLAND; state of, with respect to the checks to population, i. 486. Imperfection of the registers of births, deaths and marriages, i. 486. Average mortality, and probabilities of life, i. 487, 488. Proportion of marriages, i 489. The condition of the lower classes considerably improved of late years, i. 489. This probably owing in part to the increase of the preventive check to population, i. 490. Diiferent state of those parts where marriages are earlier, i 492 Rapid tendency to increase in various districts, i. 493. Prolificness of the women, i. 497. State of the poor, i. 499. Endemic and epidemic diseases, i. 502. Scurvy, rheumatisms, consumptions, fevers, and small pox, i. 503. Scarcities and famines, i. 504 Effects of these upon deaths, births, and marriages, in some parishes, i. 508. In general overpeopled, i. 509. Romantic passion of the peasants, and its beneficial influence on the national charac[illegible] ii. 320, note. Advantage of superior instruction possessed [illegible] lower classes, and its beneficial effects, ii. 414, 494. See also [illegible]rticle *Highlands*.

SCURVY, its inveteracy in Scotland, i. 502.

SELF-LOVE, the principal source of improvement, the state of mankind, ii. 101, 108, 499, 515. Distinguished from selfishness, ii. 516, note.

SENSUALITY of all kinds strongly reprobated in the ordinances of Menu, i. 228, 229.

SHANGALLA negroes, singular custom respecting polygamy among, i. 180. Shortness of life among, i. 189.

SHEPHERDS, what renders nations of them peculiarly formidable, i. 113. Difficulty of the transition from the pastoral to the agricultural state, i. 145. A certain degree of security necessary for this purpose, i. 156. See also the article *Pastoral*.

SIBREIA, Northern; state of, with respect to the checks to population, i. 198. Frequent scarcity of food, i 198 Ravages of the small-pox, i. 200. Mode of living, i 200, 201. Southern; extraordinary fertility of the soil; population nevertheless does not increase in the proportion which might be expected, i. 202. The great check in this case is, the want of demand for laborers, i. 203. A bounty upon children would not effectually increase the population, i 204. Means to be taken to produce that result, i. 204. Beneficial changes effected by the late empress of Russia in this respect, i. 207. The introduction of habits of industry, still necessary, i. 210. Unhealthiness, occasional droughts, and other circumstances unfavorable to increase, i. 211.

SILESIA; proportion of its annual mortality to its population, and of births to deaths, i. 394. See also the article *Prussia*

SILVER; effect produced on its value, by bounties on the exportation of corn, ii. 259—263.

SIRE, prevalence of putrid fevers in, 185.

SLAVERY, this condition unfavorable to the propagation of the species in the countries where it prevails, i 298. Checks to population which are peculiar to a state of slavery, i. 298.

SLAVES; great and constant exportation of, from Africa, i. 177. Practice of selling, in China, i. 262

SLESWICK, duchy of; comparative state of the poor in, ii. 406.
SMALL-POX, its ravages among the American Indians, i. 53, 55. Among the Kalmucks who inhabited the fertile steppes of the Wolga, i. 167. In Persia, i. 225 Dreadful in the northern parts of Siberia, i. 200 In Scotland, i. 503. Its effects much increased by a superabundant population, ii. 63, 64. Notwithstanding its destructive ravages, the average population of the earth probably not affected by it, ii. 362 Consequences of its possible extirpation by means of the cow-pox, considered, ii. 363. See also ii. 489.
SMITH, Dr.; examination of his arguments in support of his assertion respecting the effect produced on the price of corn by a bounty upon its exportation, ii. 238—262.
SOCIETY ISLANDS. See the article *Otaheite*.
SON; to have one born confers on a man spiritual benefits of the highest importance, according to the ordinances of Menu, i. 226, 227.
SOUPS, cheap; utility and value of such inventions estimated, ii. 456.
SOUTH-SEA ISLANDS; state of, with respect to the checks to population, i. 79. Some of the more considerable, but less known, islands, i 81. New Zealand, i. 81. Otaheite [illegible] the Society islands, i 86. The Friendly and Sandwich islands [illegible] Vice, including war, the principal check, i. 102. Easter i[illegible] Marianne islands, Formosa, and others, i. 103—105. The fertility of these islands probably exaggerated; occasional scarcities in them, i. 106. The average population generally presses hard against the limits of the average food, i. 107.
SPAIN, wretched state of the poor in, ii. 407.
SPARTAN discipline considered, i. 109.
SPECIE; old prejudices respecting, strikingly resemble those on the subject of population, ii. 281.
SPECULATION; the late rage for wide and unrestrained, a kind of mental intoxication, ii. 96.
SPIRITS. See the article *Distilleries*.
SPRING, loaded with a variable weight, the generative faculty compared to, i. 27, note.
STATISTICS; many parts of, to which history might very usefully be made to extend, i. 23, 25.
STEUART, sir James; his plan of improving the condition of the poor considered, ii. 435
SUBMISSION; the measure of, to government, ought to be determined by general expediency, ii. 373.
SUBSISTENCE; the means of, the ultimate regulator and check to the increase of plants and animals, i. 1, 2 Cannot be permanently increased farther than in an arithmetical ratio, i. 8, 12. The want of, is the most efficient cause of the immediate checks to population, ii 57. The general amount of population regulated in this respect by scarce seasons, and the recurrence of unfavorable periods, and not by plentiful or favorable ones, i 168, 170. Countries are populous according to the quantity of human food which they produce or can acquire and happy according to the liberality with which this food is divided i. 72.
SUFFOLK, proportion of its annual births to its population, i. 471
SUNDAY-SCHOOLS, ii. 415.
SWEDEN, state of, with respect to the checks to population, i. 328 Comparative efficacy of the preventive and the positive checks,

528. Large proportional mortality, i. 329, 390. Cause of this, i. 331. Does not produce food sufficient for its population, i. 331. Affected in a peculiar manner by every variation of the seasons, i. 334. Statement of average mortality, i. 335. Proportion of yearly marriages, i. 335. The population of, is continually going beyond the average increase of food, i. 336. The government and the political economists of, are nevertheless incessantly laboring for its further augmentation, i. 337. A supply beyond the effectual demand for labor could only produce misery, i. 338 Accusations against the national industry probably not well founded, i. 338, 339. The woods sometimes cleared away too precipitately, without consideration of the probable value of the land when cleared, i. 340. This country might possibly have been better peopled formerly than at present, but the supposition not probable, i. 341. Political regulations impeding the progress of cultivation, i. 342. Measures of the government for the encouragement of population; hospitals, &c. i. 343. Rendering the commerce of grain free throughout the interior, i. 344. Adoption of a law limiting the number of persons to each farm, i. 345. Absolute population of [redacted] country; recent increase, and periodical checks, i. 345, 346. [redacted]e with which the lower classes bear the pressures of scarcity, i. [redacted] Sickly seasons have in general arisen from unwholesome nourishment occasioned by severe want, i. 349. The general healthiness has lately increased, i. 350. Proportion of yearly births to the population, i. 390. Impossibility, or certain destructive consequences, of establishing the English system of poor laws in this country, ii. 404.

SWITZERLAND; state of, with respect to the checks to population, i. 396. Alarm which prevailed there some years ago concerning its depopulation, i. 396. Statistical paper published at that time, exhibiting a continued decrease of the births, i. 397. This circumstance, however, not decisive of a diminished population, i. 398. The mortality in the last period noticed extraordinarily small, and the proportion of children reared to puberty extraordinarily great, i. 398. Prevalence of plagues in the former periods, i. 399. An actual increase of population had probably taken place, i. 401. The diminution of births not owing to the unfruitfulness of the women, but to the operation of the preventive check, i. 402, 415. Limits to the population of a country strictly pastoral, i. 417. Effect of the introduction of manufactures into some of the smaller cantons, i. 419. Natural excitement to emigration, i. 419. If the alledged decrease did really take place, it must have improved the condition of the lower classes of people, i. 420. Effects of a redundant population seen in a clear point of view by some of the inhabitants of a particular district, i. 421. Regulations for the relief of the poor, i. 424. Agricultural improvements, i. 425. Amount of the population at different periods, i. 425.

SYRIA; state of, with respect to the checks to population, i. 215—218. See also the article *Bedoweens*.

T.

TARTARS: state of, with respect to the checks to population; their general manners, i. 144. Distribution of them according to the quantity of food, i. 146. Manners of the Mahometan Tartars, i. 148. Of the Usbecks, i. 149. The Casatshia tribe, i. 150. Other

tribes, i. 151. General habits of the Mahometan Tartars, i. 152. Heathen Tartars; the Kalmucks and Moguls, i. 153. Bedoweens, i. 154. Tribes living in a more favorable soil; the Kirgisiens, i. 160, 161. The Kalmucks who inhabited the fertile steppes of the Wolga, i. 164.

THEORY, distinction between mischievous and genuine, ii. 461, 462.

TIBET; state of, with respect to the checks to population, i. 239. Attachment of several males to one female, i. 240. To repress rather than to encourage population, seems to be an object of the government, i. 241. Celibacy recommended by powerful motives, i. 241. Religious retirement frequent and strict, i. 242. All the brothers of a family associate with one woman, i. 242. Notwithstanding these excessive checks, the population is kept up to the level of the means of subsistence, i. 243. Multitude of beggars, i. 244.

TIERRA DEL FUEGO; state of, with respect to the checks to population; scarcity of food, and want of every convenience and comfort, i. 29.

TITHES, a land-tax on improved rents would be an advantageous commutation for, ii. 218, note.

TONGATABOO, occasional scarcity in, i. 106.

TOWNS. See the article *Villages*.

TOWNSEND, Mr.; his plan of improving the condition of the poor, considered, ii 436—440.

TURKISH DOMINIONS; state of, with respect to the checks to population, i. 214. Nature of the government, i. 214. The miri, or general land-tax, rendered oppressive and ruinous by the pachas, i. 214. Consequent misery of the peasants, and deplorable state of agriculture, i. 217. Destructive extortion of the pachas, i. 218. A maximum in many cases established, i. 220. Effect of the above measures in decreasing the means of subsistence, i. 221. Direct checks to population; polygamy, i. 221. Unnatural vice; plague, and the disorders which follow it; epidemics and endemics; famine, and the sicknesses which follow it, i. 222. Late marriages among the lower classes, i. 223. Extinction of the Turkish population in another century, falsely predicted, ii. 66.

U.

UNION of the sexes; early, in New Holland, i. 35.

UNMARRIED persons; proportion of, in the Pays de Vaud, i. 414. In France, i. 428. Those who live single, or marry late, do not diminish the absolute population, but merely the proportion of premature mortality, i. 460. See also the articles *Celibacy*, *Chastity*, *Restraint*, and *Marriage*.

UNNATURAL VICE, its prevalence in the Turkish dominions, i. 222.

USBECK TARTARS, manners of, i. 149. State of, with respect to the checks to population, i. 149.

UTILITY, the surest foundation of morality that can be collected from the light of nature, ii. 423.

V.

VAN DIEMEN'S LAND; state of, with respect to the checks to population, scarcity of food, i. 30

VASSALAGE of the Russian peasants, the principal obstacle to a rapid increase of population among them, i. 371.
VICE, checks (both preventive and positive) to population which come under this head, i. 19.
VILLAGES, average mortality of, i. 329, 330. Agricultural; general proportion of their annual marriages to their population, i. 384. The general measure of mortality in single states will depend upon the proportion of the inhabitants of towns to villagers, i. 391, 392. Different proportions of mortality in towns and in villages, i. 465.
VIRGINIA, failures and hardships experienced in the first settlement of the English colony there, ii. 135.
VIS MEDICATRIX REIPUBLICÆ; the desire of bettering our condition, and the fear of making it worse, ii. 490.

W.

WALLACE, Mr. in his system of equality, has very insufficiently estimated the principle of population, and the difficulties arising from it, ii. 77, 78.
WAR; maxims of, among the American Indians, i. 61. Among the New Zealanders, i. 83. Excesses of savages of, in Abyssinia, i. 188. 189. The wars among the Grecian states were extremely bloody, i. 288. Wars do not depopulate much while industry continues in vigor, i. 296. This check to population has abated in modern Europe, ii. 75. A system of moral restraint might be expected to repress the frequency of war, ii. 325—327. Great strength of such a state of society in a war of defence, ii. 328.
WASTE among the rich, does not influence the average distress of the poor, ii. 288.
WEALTH; of increasing, as it affects the condition of the poor, ii. 188. An increase of the revenue or stock of a society, is not always a proportional increase of the funds destined for the maintenance of labor, ii. 189. Case of this nature, when a nation adds what it saves from its yearly revenue to its manufacturing capital solely, ii. 190. Wealth increasing in this way has little tendency to meliorate the condition of the poor, ii. 192. State of the poor employed in manufactories, with respect to health and other circumstances, ii. 192, 195. A nation which in average years draws but a small portion of its corn from abroad, much more precariously situated as to the constancy of its supplies than states which draw almost the whole of their consumption from that source, ii. 197. A nation possessing a large territory unavoidably subject to this uncertainty, when its commercial population is either equal to, or has increased beyond, the surplus produce of its agricultural population, ii. 198. When this increase is such that the demand for imported corn is not easily supplied, no further increase of riches will give the laborer a greater command over the necessaries of life, ii. 200. Illustration from the example of China ii. 201. Different cases of two nations increasing with equal rapidity in the exchangeable value of the annual produce of their land and labor, but applying respectively to agriculture and to commerce, ii. 201. Of the definition of wealth; and of the agricultural and commercial systems. See under the article *Agriculture*.
WIFE, difficulty in the choice of one according to the ordinances of Menu, i. 231.

WOMAN, the dictate of nature and virtue seems to be an early attachment to *one*, i. 5. Cruel treatment of women among the natives of New Holland, i. 34. Their degraded and wretched state among the American Indians, i. 46. Reason why the disgrace attending a breach of chastity in a woman should be greater than in a man, ii. 115—116. Character drawn of the women of Indostan, in the ordinances of Menu, i. 232. In a certain tribe on the coast of Malabar, several males attached to one woman, i. 238. The same custom practised in Tibet, i. 239, 243.

Y.

YOUNG, Mr.; his plan of improving the condition of the poor, considered, ii. 441—455. His objection to the plan proposed in this essay for the gradual abolition of the poor laws, and his own plan for the relief of the poor, examined, ii. 519—533.

Z.

ZOROASTER teaches that to [redacted] a tree, to cultivate a field, to beget children, are meritorious acts, [redacted].

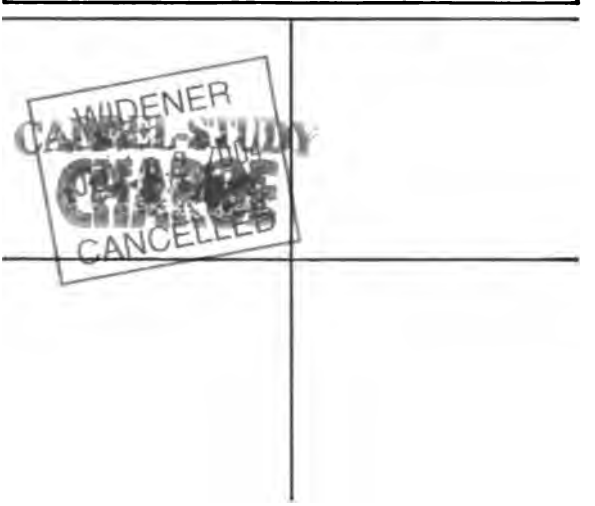
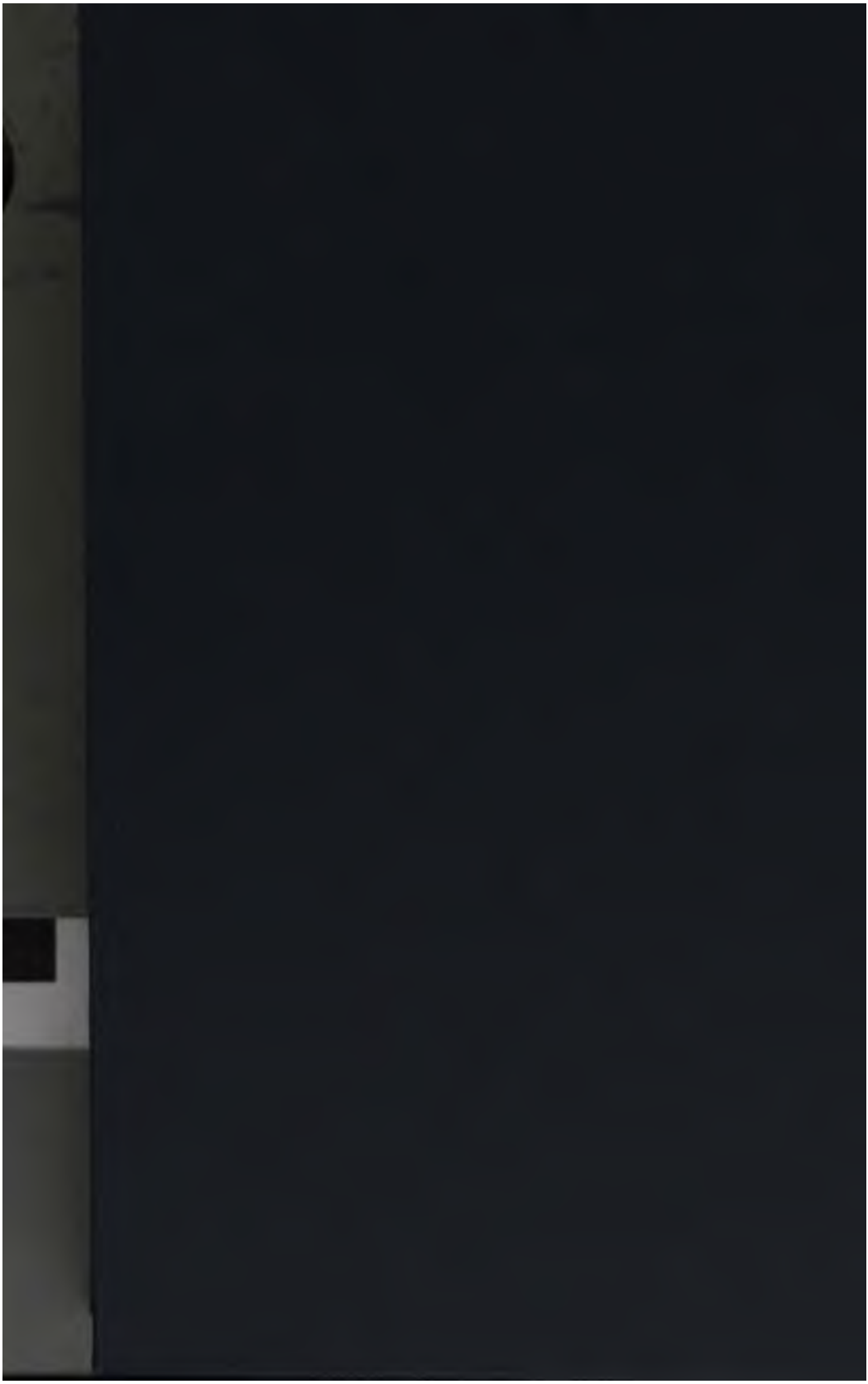
END OF VOLUME I.

Weightman, Printer.

The borrower must return this item on or before the last date stamped below. If another user places a recall for this item, the borrower will be notified of the need for an earlier return.

Non-receipt of overdue notices does ***not*** *exempt the borrower from overdue fines.*

Harvard College Widener Library
Cambridge, MA 02138 617-495-2413



Please handle with care.
Thank you for helping to preserve library collections at Harvard.